THE AMERICAN ENGINEER

MARCH-APRIL-1943

VOLUME 13-No. 2

Published by THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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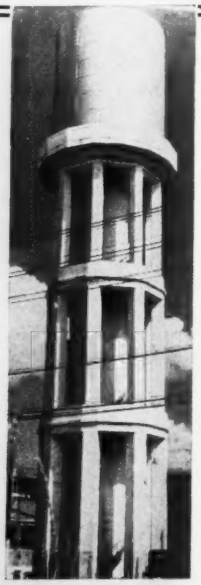

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THE AMERICAN ENGINEER

VOLUME 13, NUMBER 2 MARCH - APRIL, 1943

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NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Officers — 1943

Who They Are Whence They Come

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Born—Duluth, Minnesota. Consulting Engineer, Executive, Public Official. Member—U. S. Alaskan International Highway Commission. President — Washington Society of Professional Engineers.

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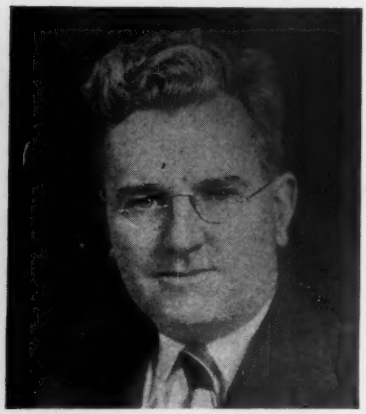
Vice President, N.S.P.E.
Native of Nacona, Texas. Educated at the University of Texas. Consulting Engineer. National Director, N.S.P.E. (On Active Duty with United States Army Air Corps.)



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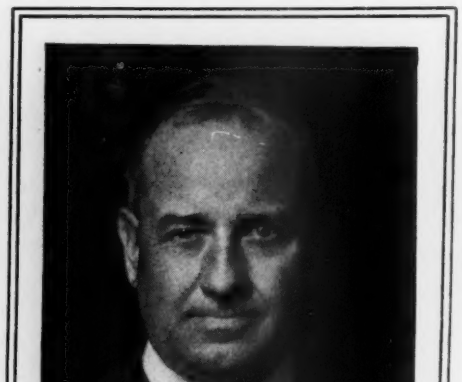
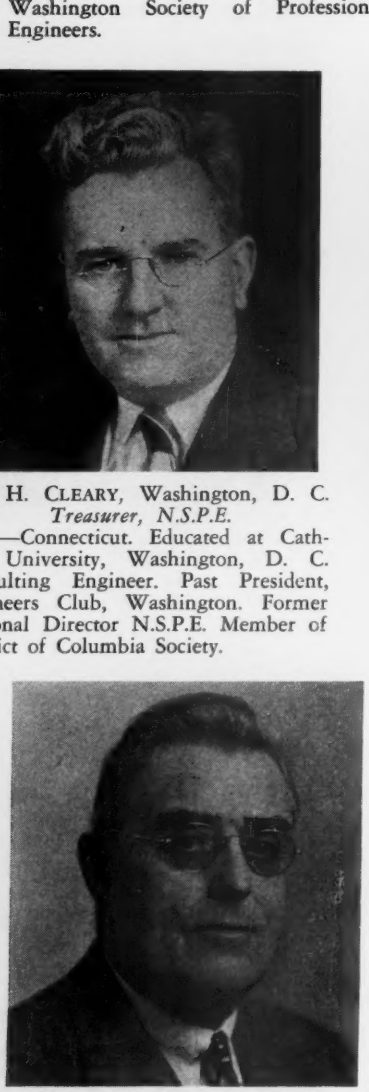
Treasurer, N.S.P.E.
Born—Connecticut. Educated at Catholic University, Washington, D. C. Consulting Engineer. Past President, Engineers Club, Washington. Former National Director N.S.P.E. Member of District of Columbia Society.



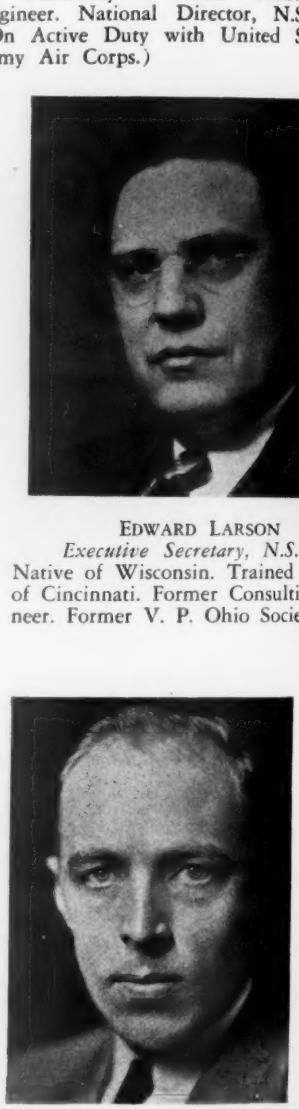
COL. WALTER L. SIMPSON, Wash., D. C.
President, N.S.P.E.
Native of Atlanta, Georgia. Trained at Georgia Tech., United States Naval Academy and U. S. Army Schools. On special service, U. S. Government. Former President — District of Columbia Society. Former Treasurer—N.S.P.E.

EDWARD LARSON
Executive Secretary, N.S.P.E.
Native of Wisconsin. Trained at Univ. of Cincinnati. Former Consulting Engineer. Former V. P. Ohio Society.



HARRY E. NOLD, Columbus, Ohio
Vice President, N.S.P.E.
Born—Ohio. Schooled at Ohio State University. Professor of Mining Engineering—Ohio State University. Former President—Ohio Society. National Director—N.S.P.E.

Lack of space prevents a biographical sketch of each. For further information address The Editor — American Engineer.



DR. FREDERICK H. ZURMUHLEN, New York, N. Y.
Vice President, N.S.P.E.
Born—New York. Educated at Manhattan College, New York. Consulting Engineer and Architect. Past President—New York State Society. Business Manager—The American Engineer.

WHY MEMBERSHIP IN N.S.P.E.?

AFFILIATION WITH A PROFESSIONAL ENGINEERING SOCIETY

MEANS RATHER — WHAT CAN ONE OFFER?
THAN — WHAT WILL ONE RECEIVE?

Hopes For Individual Recognition
Are Inherent in Collective Achievement

by

James F. Fairman

In a recent address delivered at the Annual Meeting of the Pennsylvania Society of Professional Engineers held in Harrisburg on January 30, 1943, President James F. Fairman of the New York State Society presented a forthright and effective exposition of the most difficult problem faced by the professional society movement.

"WHY should I join your society? What will I get out of it?"

You and I have heard these questions so many times that their repetition sets up in us a pardonably belligerent reaction. I know my answer is belligerent. I reply

"Not a damn thing more than you put into it."

Unless the abruptness of that answer terminates the conversation, and it usually does not, there is opened up an opportunity for some straightforward, down-to-earth discussion of the whys and wherefores of any professional organization, in the course of which I express my conviction that membership in an organization such as ours is an opportunity for service rather than a place in the bread line. As the discussion proceeds, agreement is usually reached that the individual owes a great deal more to his profession than the profession owes to him. I consider that I have reached the ultimate of success in the argument when it progresses to the point we agree on the desirability of a long range rather than a short range approach to our professional problems, on an approach characteristic of statesmanship rather than of political expediency.

JAMES F. FAIRMAN
President, New York State Soc. P. E.
Vice President-Consolidated Edison Co.

Having won that round, the next one begins with a feint by my opponent who advances the statement

"Yes, but I cannot afford to pay dues in more than one society."

I come back something after this fashion,

"My friend, your income and your disposition of it are none of my business but have you ever stopped to figure out what percent of your income you return in the form of dues to professional societies, and have you ever contrasted that with the annual cost of your cigarettes or of whatever vices or pleasures you indulge in? Do you place a value on your profession adequately represented by your dues? "Suppose it becomes necessary for you to belong to a union in order to practice your profession, what do you think the dues would be and what would you get for them? In the meagerness of the dues we pay to our professional societies, do we not ourselves set our own value on our professional organizations and if we do not value them any higher, why should we be surprised if the public places no higher value on our profession?"

The final obstacle raised by many sincere persons may be stated in this manner,

"Yes, I agree with all you say, but I have a great many other irons in the fire and I do not like to belong to any organization in whose affairs I cannot actively participate."

That statement deserves a softer answer. I say,

"My friend, I understand and sympathize with that point of view, but I think it is fallacious. True, you and I cannot participate actively in every organization, we cannot spread ourselves too thin and still be effective, but some of us can concentrate our efforts on one and some on another of these activities; and all of us should support by our dues and by our votes, to which membership entitles us, the constructive programs of every organization striving to advance the profession of which we are a part. If you cannot give of your time and effort, you can give your name and your money to this work, and perhaps when you know more of what we are trying to do and see more clearly its importance, you will find the time actively to give us a hand."

The problem of increasing and maintaining the mem-

bership of any organization is inevitably a continuing and pressing one. That is why every organization has among its standing committees, a membership committee, and that is why the membership committee is probably the most important of all the committees and should command the talents of the wisest, most tactful, most understanding and most active members. Aggressiveness of the wrong sort, over-selling, appeals to selfishness, and comparisons unfavorable to other societies are to be avoided at all costs. They seldom accomplish the desired results, they never obtain the most desirable type of member, and they arouse enmities which endure long after the occasion for provocation has been forgotten. Even some of our bright ideas may backfire. In citing this example, I am aware that I am sticking out my neck by calling in question the wisdom of the founding fathers. I refer to the use of the term "engineer" as a form of address in lieu of the time honored and plain American "Mr.". This usage appeals to many people as an attempt to lift ourselves by our bootstraps, others less kind label it a silly affectation. I have noticed that it is hard for many of our members to remember to use it as a form of address when speaking or writing to an individual and, moreover, when they do use it there is apt to be a note of timidity in their voice. I will admit frankly that I stumble over it in spite of my best efforts to try to conform to what I understand to be a tradition. I honestly wonder whether it isn't something we had better forget because such minor handicaps are frequently of significance all out of proportion when we try to do a selling job and in these days particularly, many rugged individuals are just naturally suspicious of anything that has the least suggestion of a European background.

That our membership committees have done and are continuing to do a good job is evidenced by the continuing growth of our membership, but I am sure that no one of us would say that we could not do even better than we have been doing. We have something worth selling but we need periodically to reexamine our selling methods. Based on my own observation and experience, I am convinced that there is no substitute for personal effort on an individual basis. Campaigns conducted by mail seem to be less and less effective. Probably it is because everyone's mail is full of all sorts of potential raids on his pocket-book that one habitually consigns such mail to the waste basket without giving any of it serious consideration. If we adopt the slogan, "Every Member Get A Member", and then put the slogan into effect, I believe we would be astonished at the results.

After one of our mail campaigns had been a complete flop, at a considerable cost to our treasury, the County Chapter of which I am a member took a list of all the licensed engineers resident in the County who were not members of the Chapter; and, beginning with the president of the chapter, each officer and director took from that list, the names of every man he knew well enough to approach. The initials of the member were placed alongside each name he took as his personal responsibility, and the membership Committee required him to report progress on each name. As I remember it, I took some 25 names and ultimately accounted for everyone of them in one of the following ways. First, I quickly signed up a substantial number of members by picking the easiest prospects on my list. I still have a small list of prospects of which I am hopeful and which remain my responsibility. On my recommendation, certain names were stricken from the list as being cases on which I was convinced no further efforts should be expended. Most of these were persons who had retired from active practice, only a few of them were persons who were so antagonistic that I felt no good would come of pursuing the matter further. After the officers, the directors and the members of the Membership Committee had done their jobs in this fashion substantial inroads had been made on the total list. We then asked for volunteers among the more active chapter members and the list was still further reduced. This method had two results. First, it increased our membership substantially in a short period of time and second, it definitely earmarked the names of those on whom no further effort of any kind could advantageously be expended.

If you will pardon the analogy, "You don't go after big game with a shot gun, you use a rifle."

Newly licensed engineers are, in my opinion, the most impressionable group from which new members can be drawn. For some years past in the New York State Society, we have been sending a letter to every newly licensed engineer and enclosing with it an application card for membership in the County Chapter where he resides. The results are most gratifying.

It appears that in the very near future, we shall have the opportunity of enlisting participation in the society's activities on some appropriate basis, of graduates of engineering colleges when they have passed the first stage of their professional examination. Here is an opportunity and an obligation. I fervently hope we shall be wise enough to go about our job in a way which will commend itself to these young men and to all other groups concerned with their professional development.

In talking up our society with prospects, there are a number of points which we can very properly emphasize. First, our membership is composed exclusively of licensed professional engineers. Second, it is one organization for the whole engineering profession and it desires to be truly represntative of the whole profession by including within its membership practitioners in all the various fields of engineering activity. Third, it is organized to operate effectively in units which correspond to the political subdivisions—national, state, and local. Fourth, its organization is emphatically democratic in that its members have a determining voice in the selection of its leaders and in the formation of its policies and program. A professional organization of that type has a unique opportunity for service to society, to the profession and to its members.

At the same time we need to make perfectly clear that we do not consider ourselves as the only engineering

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THE PROFESSIONAL ORGANIZATION

COMMENTS ON NATIONAL AND STATE SOCIETIES

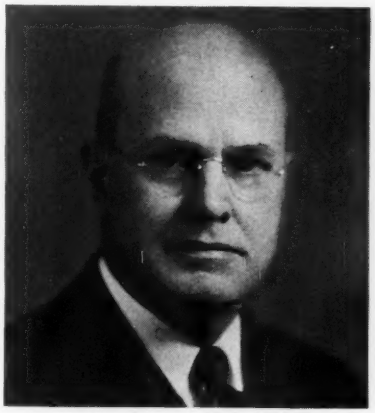
THEIR AIMS, PROGRAMS AND RESPONSIBILITIES

AN ADDRESS DELIVERED AT THE UNIVERSITY OF MINNESOTA

by

Walter H. Wheeler

THE purpose of this discourse is to introduce to students and young graduates the National Society of Professional Engineers and some of its principal aims and objectives. Let it be understood at the outset that this Society is strictly a professional body representative of the entire engineering calling. It is not a technical organization and it does not attempt to perform the functions of a technical society. There is no conflict between it and the existing technical agencies. Experience has demonstrated that its functions cannot be successfully performed by a technical society or even by a combination of technical societies.



WALTER H. WHEELER
Director N.S.P.E.
Consulting Engineer

One may assume that all aspirants and engineers are familiar with the founder societies as they are called. These are the American Society of Civil Engineers; the American Society of Mechanical Engineers; the American Institute of Electrical Engineers the American Institute of Mining & Metallurgical Engineers, and perhaps the American Institute of Chemical Engineers. There are many other technical societies which cover the various branches of the engineering profession. The objectives of the technical socities are to advance the art of Engineering and to disseminate scientific knowledge among their members. They perform very definite and necessary services to their respective branches of the profession.

The objectives of the National Society of Professional Engineers are different from those of the technical societies in many respects, yet they are closely related and interdependent. Simply stated, the professional society was formed for the purpose of developing teamwork among the members of the engineering profession. Professional engineers are inclined to be individualists, each going his own way and each trying to carve out his own particular niche in the hall of fame of his chosen specialty. In a measure that is as it should be. However, if engineering is to be rated as a profession and have a standing in public esteem equal to that of the doctors, the lawyers and the architects, there are certain duties which it must perform and certain obligations which it must assume.

In order to perform those duties and carry out those obligations, the profession must present to the world a united front in professional matters. This is something which the engineering profession has to date failed to do, but which it is beginning to manifest through this new organization,—the National Society of Professional Engineers. One does not need to dwell upon collaboration. No football team, no basketball team can ever make a go of it without well developed teamwork. In the same way no large business or industry can be successful without teamwork, which is just another name for organization. The engineering profession is a big business, but it has tried to function without adequate organization.

There are over 200,000 persons who term themselves professional engineers in the United States, but only about 75,000 of these are legally qualified to practice the profession of engineering. One of the primary objects of the National Society of Professional Engineers, which is composed exclusively of legally qualified engineers, is to see to it that no one in this country assumes the title of Professional Engineer or practices professional engineering until he has been qualified by the duly constituted public authorities, and has obtained a certificate to show that he is competent to engage in engineering. Why does the Society seek this objective? For the same reason that the medical and legal professions do, viz., to protect the public from incompetence and charlatanism. Such procedure gives the profession a public status. When a man or a woman writes after his or her name the title professional engineer it means something. This status is accomplished through legislation, in the form of registration or license laws.

Registration laws must be state laws. Therefore, in order that a license to practice the profession of engineering in the State of Minnesota shall mean the same thing that it does in the State of New York, it is necessary that these laws shall be in conformance with certain standards and that the requirements shall be as uniform as possible. That one may the better understand what is herein intended, the statement on the professional enginers license in the State of New York is quoted:

"Be it known that—John Doe—having given

(*Continued on Page* 27)

POST-WAR PROSPECTS OF ENGINEERING

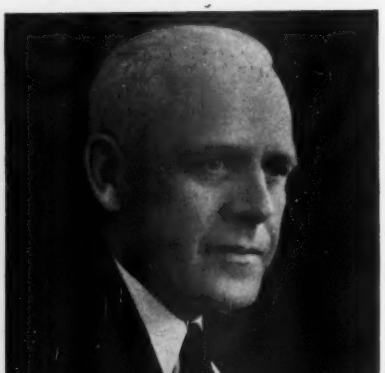
SOME REFLECTIONS AND OPINIONS

INCLUDE PAST—PRESENT AND FUTURE

by

Colonel Ivan C. Crawford

With some slight omissions pertinent to the occasion, the address of Col. Crawford is published in full. It is both timely and encouraging.



COL. IVAN C. CRAWFORD
Dean, College of Engineering U. of Mich., Consultant-Bureau of Navy Personnel.

Some History

IF we are to talk about Post-war Prospects, it is necessary to go back a little in point of time and consider how far engineering has come in an educational way. We don't have to go back so very, very far. Only one hundred and ninety-five years have elapsed since the first engineering school came into existence. It was formed in the office of John Rodolphe Perronnet the Chief Engineer des Ponts et Chausees in France, for the purpose of training young men who would follow careers in the service of the Empire after the proper amount of engineering education. Thus, in this office began the famous Ecole des Ponts et Chausées. From it came the Ecole Polytechnique which has so materially influenced engineering education in this country.

England did not take kindly to this new type of education. Many years elapsed before the old universities saw the light. Not all have seen it yet. The Scottish universities were more sympathetic to the stranger. In the year 1840 we note that the University of Glasgow established a chair of civil engineering. After the chair had been established the traditionalists on the faculty tried to have it abolished.

The English began with the idea of pupilage or apprenticeship and it is only in comparatively recent years that this form of education has been abandoned. From this English practice, and from inherent characteristics of engineering comes the high value set by the profession on practical experience despite the fact that our formal educational processes have been based on the French technical schools. We realize more clearly every day how important it is that the engineer have the best possible formal education. However, a glance at the licensing laws of the various States reveals nothing in those laws which state that an applicant must be a graduate of an engineering school in order to qualify. He must be able to pass certain examinations. He must have had certain experience. Engineers learned early what Lord Tweedsmuir, late Governor General of Canada, ascertained after he had completed his university career and followed it by several years of experience in South Africa. "There," in Africa, he says, "he discovered that there was a fine, practical wisdom that owed nothing to books and academies." May this pathway in the years ahead remain open so that we may have exceptional men enter the profession through a channel other than that of formal technical education. They will be few and far between, but men of great ability will find that path and will continue to follow it.

West Point was our first engineering school. Before the founding of West Point, George Washington became aware of the fact that the colonies needed engineers. He carried his troubles to the Continental Congress. Then, as now, engineers were needed immediately. Finally, the Congress in a secret session "Resolved, that the committee of correspondence be directed to use their endeavors to find out and engage, in the service of the United States, skillful engineers, not exceeding four, in the best terms they can; and that the said committee be authorized to assure such able and skillful engineers as will engage in the service, that they shall realize such pay and appointments as shall equal to what they have received in any former service." Four men came from France. Three were field officers and engineers; the fourth was a major general of artillery. The engineers refused to serve under the general because he wasn't an engineer. Finally the problem was solved when the general drowned himself, not purposely, when crossing a stream. The engineer officers remained and served well throughout the period of the War.

Engineering came to Union College in 1849; to Dartmouh in 1851. Real development came in 1862 when the Morrill Act was passed. The Act encouraged "the application of science to the common purposes of life." Within ten years, the number of engineering colleges increased from 6 to 70.

Our Present Situation

By 1910 some members of the profession were beginning to say that perhaps there were too many students in our engineering colleges and to ask where were they to find jobs. However, we went along fairly well. Engineers were absorbed. Then came the years of the World War which were followed by the frenzy of the late twenties. There weren't enough engineers. Along came the dismal early

(Continued on Page 26)

HOUSING AFTER THE WAR

THE ROLE OF THE ENGINEER

HIS OPPORTUNITIES AND HIS PREPARATION

SOME REFLECTIONS BORN OF ENGLISH DISCUSSIONS

by

Jacob Mark

Where has the Engineer been in the development of housing and what can he do in the field after the war? Is he sufficiently interested to investigate? If so, he will find that there are many opportunities awaiting him if he is willing to think, to work, and to take on the role of promoter.

Heretofore the Engineer has had little interest and less direction in the effectuation of Housing. He has been employed on multi-story dwelling structures when the same were of a steel skeleton or reinforced concrete type. The promoter or builder retained the architect who would sometimes employ Engineers to design foundations, steel and concrete. Likewise he would engage other Engineers to plan the electrical, heating, and elevator equipment. On such work the Engineer has been in a subordinate position. Barely has he been a principal and still more rarely has he been a prime mover in initiating housing projects.

JACOB MARK
Member N. S. P. E.
Consulting Engineer and Builder

In this issue the author whose opinions on "World Barriers" which appeared in the July-August issue of The American Engineer, aroused considerable discussion comments on the subject of Post War Building Construction. His views on this latter topic were prompted by the report of the recent British Conference of Architects, Engineers and Builders published in the American Engineer of Nov.-Dec.

At some of our universities, Engineers have experimented with and developed various ideas applicable to housing. A few have written dissertations on housing and on the economics of shelter. But with rare exception research, development and construction, incident to building and housing, have been projected and performed by others. The outlook of the Engineer has been generally that of the employee or commissioned agent. From the illustrious Leonardo da Vinci to the Municipal Engineer of the present day, most of the members of the Engineering Profession have sought the opportunity to work for others rather than for themselves.

"Housing After the War" offers many possibilities to the Engineer. The time to consider and plan for such possibilities is now. The person who is interested should map his programs in advance. He should study recent housing techniques and projects and become familiar with building design and layout; he should give thought to the selection of sites and should interest himself in politics and in public affairs. Such activities will help him to be of service to the community and to possible backers as well as to himself. Knowledge is a prerequisite to production. This applies especially to housing.

In ancient times, says Draper the historian, "Greek Architects and Greek Engineers made Alexandria the most beautiful city in the world". Present day Engineers and Architects can make our cities more livable and more beautiful and can do much to initiate, on a large scale, the building of future housing facilities. Various universities presently conduct courses in City Planning and in Housing. Other opportunities for study and observation are plentiful. City, State and Federal Agencies have produced a wealth of descriptive matter and have executed many projects from which to gain information.

As before noted, the interested Engineer should begin at once to prepare himself for "Housing After the War". "Procrastination is the thief of time". The opportunities then will be many. Preparation after the opportunity is useless. Cities and rural districts are crying aloud to be built and rebuilt. Devastated areas must be resurrected. To be of immediate service in such a program the Engineer must familiarize himself with housing and zoning laws and must make a study of labor and of materials to be used in construction. To his technical knowledge, he must add the economics of building and of maintenance. With this he must cultivate initiative, the desire to take responsibilities and risks, and the will to be an enterprising projector rather than an employee. He should seek the causes of high building costs, the losses occasioned by antiquated building codes, the cure to jurisdictional disputes, the means to reduce high finance charges, the answer to bad planning and the improvement of poor plot selection. He must exercise his talents and apply his will to acquire a working knowledge of the craft of housing. Through such endeavor he can prepare himself

(*Continued on Page* 27)

Submitted as:

ITEMS OF GENERAL INTEREST

THE MOBILIZATION OF SCIENCE

Proposal to Place Pure and Applied Forms Under Control of Federal Agency

Again Introduced in Congress
By Senator Harley N. Kilgore

Engineers should review and appraise the wisdom and propriety of a legislative proposal which envisions great progress and national welfare but which is fraught with unusual possibilities for misdirection. Moral as well as scientific issues may be at stake.

Introduced at the last session of Congress, too late to receive serious consideration, legislation proposed by Senator Kilgore of West Virginia, whereby the scientific and technological resources of the nation would be mobilized under the control of an independent Federal Agency, will undoubtedly be the subject of much debate during the coming months.

The objectives of the measure which is Senate Bill Number 702 introduced February 11, 1943 as set forth are:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

DECLARATION OF POLICY

Section 1. The Congress hereby recognizes that the full development and application of the Nation's scientific and technical resources are necessary for the effective prosecution of the war and for peacetime progress and prosperity, and that serious impediments thereto consist in—

the unassembled and uncoordinated state of information concerning existing scientific and technical resources; the lack of an adequate appraisal, and the unplanned and improvident training, development, and use, of scientific and technical personnel, resources and facilities in relation to the national need;

the consequent delay and ineffectiveness in meeting the urgent scientific and technical problems of the national defense and essential civilian needs;

the trend toward monopolized control of scientific and technical data and other resources with lack of access thereto in the public interest; and

the absence of an effective Federal organization to promote and coordinate, in the national interest, scientific and technical developments.

The purposes of this Act accordingly are—

(1) to appraise the current use of scientific and technical knowledge, facilities, and personnel, and to develop comprehensive national programs for the maximum use of science and technology in the national interest in periods of peace and war;

(2) to mobilize for the prosecution of the war all scientific and technical facilities;

(3) to facilitate after the war the transition of the national economy from the tasks of war to peacetime enterprise;

(4) to assemble, coordinate, and develop for use, in the public interest, all scientific and technical data and facilities; to facilitate access to scientific and technical information and literature and to aid and encourage the writing and publication thereof;

(5) to promote the full and speedy introduction of the most advanced and effective techniques—for the benefit of agriculture, manufacturing, distribution, transportation, communication, and other phases of productive activity; for economical and efficient Federal, State, and local government; and for the national defense and general welfare;

(6)) to aid, encourage, and protect the research and enterprise of inventors, scientists, technicians, scientific and educational institutions, research laboratories and Government establishments engaged in scientific and technical work, and to make their resultant discoveries and data more readily available, and without discrimination, to all sections of industry, agriculture, and the public, in order to aid the war effort at the present time and in order to promote full employment and higher standards of living after the war;

(7) to discover and develop substitutes for strategic and critical materials, and to promote the most beneficial use of agricultural, mineral, and other natural resources;

(8) to promote interest in scientific and technical education, and to provide for all qualified persons the means of scientific and technical training and employment;

(9) to provide guidance in scientific and technical matters to the President, the Congress, and all Federal, State, and local government agencies and establishments, and to contribute guidance and, in all proper cases, financial and other assistance to solution of the technical and scientific problems of industry, agriculture, and of any agency or establishment or individual inventor;

(10) to promote the maintenance and expansion of free enterprise by making available to smaller businesses the benefits of scientific advancement;

(11) to standardize, when in the public interest, scientific, and technical designs, practices, and specifications; and

(12) to encourage and assist non-profit national scientific and technical organizations, already established on democratic lines by the engineering profession, to assure maximum cooperation and integration of the facilities and personnel of governmental and private agencies, institutions, and employers for the above purposes, and to assist the activity of these facilities and personnel, where necessary, in the national interest.

This Act may be cited as the "Science Mobilization Act".

It is doubtful if any legislation of recent years is of greater significance or has greater implication than that proposed by Senator Kilgore. So much is there to discuss concerning its functions, proposed organization, operation, phraseology, inferences and possibilities that a detailed review would require many times the twenty-two pages which comprise the bill. Insomuch as there is little likelihood of action for several months, a complete analysis might better be reserved for a future opportunity. At the moment, only some preliminary comments will be offered.

Laudable as the stated objections are the indicated modus operandi should receive thorough study before acceptance or rejection of the proposal in its entirety.

One feature that merits serious consideration is the suggested form of organization and the authority to be granted to the new agency. It is conceivable that the actual powers of the "Administrator", who will head the agency, might eventually become far greater than the author of the legislation probably has in mind. While the legislation provides for a National Scientific and

Technical Board with definite selected representative membership, the personnel of the said Board, as well as the Board itself, can perform only such duties as the Administrator may determine. Furthermore he has complete direction and control of such duties. There is also provided a National Scientific and Technical Committee, the composition of which is indicated in the Act. However, this Committee is merely an advisory one. Throughout the measure the Administrator is the deciding voice on all matters. Considering what such control or authority might mean in the field covered, especially in the promotion and direction of applied as well as pure science, such authority looms as extraordinary for an agency which is to function in peace times as well as war.

A second item of interest is the specific exclusion of doctors and dentists from the provisions of the Act. The reason for this might well be inquired into.

Another matter of concern is the apparent tendency to by-pass states in dealing with their political subdivisions. This resembles other Federal activities during recent years and might lead to various uses of Federal power.

Other provisions of primary interest pertain to the solicitation and receipt of aid and support from "any source"; the fostering of international cooperation; the control of patents, inventions and discoveries; the creation and organization of corporations; the appropriation and use of monies and the heavy representation of labor and industry as compared to that of scientists and engineers on the Scientific and Technical Committee.

Every citizen of the United States should be informed of this legislation and should be encouraged to express himself concerning the same. Every scientist and engineer should read and reflect deliberately upon the proposals contained in the bill and should take a leading part in discussing and debating the merits of the measure as a whole.

ENGINEERS!! SECURE AND READ CAREFULLY SENATE BILL NUMBER 702 DATED FEBRUARY 11, 1943 INTRODUCED BY SENATOR KILGORE OF WEST VIRGINIA. ADVISE YOUR STATE AND NATIONAL SOCIETIES OF YOUR OPINIONS. THE ADDRESS OF THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS IS NATIONAL PRESS BUILDING, WASHINGTON, D. C.

ACT WITHOUT DELAY!

FAITH OF THE ENGINEER

The following submitted by Professor Dugald C. Jackson, Chairman of the Joint Committee on Ethics of the Engineers' Council for Professional Development is published at the suggestion of Past President Steinman in order that the membership of N.S.P.E. may have an opportunity to review all submissions. Neither the Editor nor Past President Steinman endorses or recommends the same as an alternative to the proposals for suggested Oaths presented in the Christmas issue of the American Engineer.

Every submission is on its own. What is your reaction? Have you a contribution?

"Faith of the Engineer

I am an Engineer. In my profession I take deep pride but without vainglory; to it I owe solemn obligations that I am eager and earnest to fulfill.

"As an Engineer, I will participate in none but honest enterprise. To him who has engaged my services, as employer or client, I will give the utmost of performance and fidelity; but on such services I shall always place the full value that is their due.

"When needed, my skill and knowledge shall be given without reservation for the public good. From special capacity springs the obligation to use it well in the service of humanity; and I accept the challenge that this implies.

"Jealous of the high repute of my calling, I will strive to protect the interests and the good name of that Engineer whom I know to be deserving; but I will not shrink, should duty dictate, from disclosing the truth regarding him who, by unscrupulous act, has shown himself unworthy of his profession.

"Since the Age of Stone, human progress has been conditioned by the genius of my professional forebears. By them have been rendered usable to mankind nature's vast reservoir of materials and latest energy. By them have been vitalized and turned to practical account the principles of science and the revelations of technology. Except for this heritage of accumulated experience, my efforts would be feeble. I dedicate myself to the dissemination of engineering knowledge, and, especially, to the instruction of younger members of my profession in all its arts and traditions.

"To my fellows I pledge, in the same full measure I ask of them, integrity and fair-dealing, tolerance and respect, and devotion to the standards and the dignity of our profession; with the consciousness, always, that our special expertness carries with it the obligation to serve the public interest and humanity."

DELAYED!!

Past President J. W. Beretta, now Lt. Col. Beretta, some time since addressed a number of people, including the Editor and the Business Manager, who did not receive the correspondence until quite recently. Lt. Col. Beretta faithfully responds to all requests for assistance or for his opinion on matters referred to the past presidents of N.S.P.E. who have been a special committee on society policies and activities during President Holbrook's administration. His continued activity in behalf of the professional engineering movement, in spite of his military duties, is appreciated by the Society. That the Colonel is still active in engineering may be gleaned from the following citation:

> 'A San Antonian this week was given credit by Maj. Gen. Gerald C. Brant, commander of the Gulf Coast Training Center, for having accomplished some of the outstanding engineering feats necessary to building the new air and naval base at Newfoundland.
>
> "It was Lieut. Col. Jack Beretta. According to the General, who served as commander of the new base for a year. 'Jack built one 'impossible' bridge and completed a highway over tortuous mountains, while other engineering groups were saying it couldn't be done.' "

Congratulations Past President Beretta!

BOARD OF DIRECTORS MEETING

WASHINGTON, FEBRUARY 20, 1943

The first meeting of the 1943 Board of Directors was held in the Hotel Willard on Saturday, February 20th with representatives from the District of Columbia, Maryland, Minnesota, New Jersey, New York, Ohio, Pennsylvania and Texas in attendance.

While the reports of officers were presented and discussed, the principal business of the meeting involved the admission of the Minnesota Association of Engineers to membership in N.S.P.E., the issuance of the American Engineer on a monthly basis, consideration of legislation introduced in Congress, membership and schedules for engineers in public service.

Minnesota, having duly applied in accordance with regulations, was unanimously approved for membership and Mr. Walter H. Wheeler, representing the Minnesota Association was immediately invited to sit as a member of the Board. He ably participated in the proceedings and discussions.

The question of returning the American Engineer to a monthly basis was discussed and debated for a considerable period of time. Anxious to re-establish the magazine as a monthly publi-

cation, the Board resolved, despite the exigencies of war, to appoint a Special Committee to consult with the Publisher, Business Manager and Editor. President Simpson appointed Messrs. Allen, Chairman of the Publications Committee, Sacks, Chairman of the Legislative Committee, Associate Editor Craig, Editor Sheridan and Business Manager Zurmuhlen.

Two legislative measures presently pending in Congress were disapproved for certain features. One dealing with the Sanitary Corps, would require all future officers to be medical men. This would militate against present engineering officers and would eliminate future engineers from Commissions in that Corps. The second measure was the reintroduced Mobilization of Scientific and Technological Resources sponsored by Senator Harley M. Kilgore of West Virginia. This bill is commented on elsewhere in this issue. It was decided that a complete review and study of the measure would be undertaken by the Society.

A proposal of the Ohio Society offering its services toward the establishment of Highway Schedules was referred to The Special Committee appointed for that purpose at the 1942 Annual Meeting. The consensus was that it would be impracticable and provocative of criticism if only Highway Engineers were to be scheduled.

The action of New York in meeting the situation created by the establishment of two-stage license examinations, and "Engineers-in-Training" as a result of the preliminary examination, was deemed of the utmost importance and the results will be eagerly awaited.

Despite the losses occasioned by the war, the membership continues to expand and the dues collected for the first quarter will be used as a yardstick for an elastic 1943 budget, which must be kept well within income in order to provide for the remitted dues of men in service. A financial statement for the year 1942 indicated that the Society had received $23,230.17 and had expended $24,687.36. Obligations due the Society and collected in January and February will, it is hoped, bring the receipts above the expenditures. Following is the Treasurer's statement:

EXPENDITURES

Rent	$ 1567.50
Furniture and Fixtures	213.50
Telephone and Telegraph	492.49
Stationery, Supplies and Printing	1073.06
Postage and Express	383.85
Salaries	10580.33
Traveling	1641.64
Misc. Pub. Rel.	500.03
Taxes	381.03
Committees	300.00
Board of Directors	153.56
American Engineer	6119.97
Elections	377.01
Conventions	416.19
Audit	100.00
N.C.S.B.E.E.	200.00
Misc. and Contingencies	187.20
TOTALS	$24687.36

INCOME

American Engineer Advertising	$ 204.00
American Engineer Subscriptions	347.50
Sales (net) Emblems	317.50
Sales Certificates	171.27
Dues — Back	2369.50
Dues — Current	19544.00
Dues — Advance	277.00
	$23230.77

A comparison of the years 1937-1942 inclusive shows:

STATE	1937	1938	1939	1940	1941	1942
Arkansas		176.00	200.00	160.00	316.00	200.00
California	40.00	24.00	36.00	4.00		
Connecticut	293.00	352.00	434.50	322.50	499.00	373.00
Delaware			158.00			
District of Columbia	334.00	272.00	299.00	405.50	381.00	447.00
Illinois	112.00	188.00	204.00	256.00	324.00	308.00
Indiana	975.00	1293.00	1176.50	1275.00	1398.00	1410.00
Kentucky	36.00	76.00	40.00	44.00	12.00	36.00
Maryland		58.00	112.00	64.00	124.00	140.00
Massachusetts	10.00	34.00	34.00	36.00	4.00	96.00
Missouri	188.00	156.00	82.00	43.00	36.00	88.00
Nevada	20.00	20.00	36.00			
New Jersey	1038.00	1219.00	1433.00	1304.00	1414.00	1366.00
New York	5098.35	6431.00	6623.05	6825.00	6749.00	6488.00
Ohio	1292.50	1031.00	859.00	1891.00	4411.00	5852.00
Oklahoma	334.00	320.00	460.00	416.00	416.00	396.00
Pennsylvania	1427.34	1795.00	2126.00	2534.00	2546.00	2481.00
Rhode Island	88.00	108.00	128.00	156.00	156.00	176.00
Tennessee	8.00	28.00	24.00	4.00	8.00	4.00
Texas	298.00	282.00	664.00	731.00	1058.00	1594.75
Virginia	180.00	180.00	188.00	248.00	172.00	128.00
Washington		84.00	44.00	140.00	128.00	153.00
West Virginia	48.00	65.00	92.00	70.00	73.00	93.00
At Large	32.00	74.00	130.00	70.00	230.00	170.00
Sub Total	11,852.19	14,266.00	15,583.05	16,999.00	20,456.17	22,043.75
Emblems	1,270.00	930.00	947.00	770.00	805.50	945.00
Certificates	208.05	161.00	244.60	201.50	202.50	210.00
Am. Engr. Subs.	42.59	56.07	102.50	73.95	91.12	127.75
Am. Engr. Adv.	628.40	557.10	230.68	38.50	141.50	218.00
Misc.	107.39	540.00	264.70			
TOTAL	14,108.62	16,510.17	17,373.20	18,082.95	21,696.79	23,544.50

Fragments from

STATE & SOCIETY ACTIVITIES

CALIFORNIA

Issues List of New Registrants

Through the couresy of the Registration Board, the American Engineer is advised by Assistant Secretary Pecos Calahan that the following have recently been admitted to practice in the State of California:

As Civil Engineers

Frank W. Aitken, Larkspur
Vinton W. Bacon, Los Angeles
Ben Balala, Sacramento
S. S. Ball, Van Nuys
John Henry Bateman, Kansas City, Kansas
Samuel W. Berliner, Los Angeles
Milton F. Bourke, Berkeley
Morris Brown, Los Angeles
V. Melvin Brown, Alameda
Dan E. Bundy, Los Angeles
Blair Irving Burnson, San Francisco
Fred A. Camp, Los Angeles
Edward John Carter, Sausalito
Mark Eugene Cessna, San Francisco
George Jay Christensen, El Cerrito
William R. Cobb, San Francisco
L. E. Crayne, San Diego
John Greybil Cowan, Camp Claiborne, La.
Albert M. Dunfee, Oakland
Stephen M. Dunn, Los Angeles
Frederick W. Ervast, Sacramento
Edwin W. Fehsenfeld, Los Angeles
Rex H. Fulton, Sacramento
Byron L. Green, Monrovia
Richard E. Hall, Berkeley
Ray C. Hansen, Portland, Oregon
Arthur T. Hauck, San Francisco
Richard E. Hemborg, Van Nuys
Bob Neal Hoffmaster, Long Beach
Robert Horonjeff, Berkeley
Thomas H. Ives, San Leandro
J. Alton Johanek, Oakland
Homer W. Jorgensen, Los Angeles
E. G. Knudsen, Salt Lake City, Utah
William O. Langenbach, Burbank
Einar Larsen, Oakland
Walter Arthur Leichtfuss, Oakland
Jack Y. Long, Oakland
Nathan C. McCorkle, Sacramento
John W. McDuell, Cambridge, Mass.
Joseph C. Moxcey, Santa Barbara
Francis Noel, Eagle Rock
John M. Olayos, Jr., San Rafael
Noel L. Owen, Jr., Los Angeles
Alan U. Palo, Los Angeles
Leslie M. Petersen, Oakland
Lawrence F. Pratt, Los Angeles
C. Harlan Ray, Oakland
Thomas W. Reynolds, Sacramento
Norman T. Riffe, Berkeley
Robert Wm. Russell, Oakland
John Sanders, San Francisco
Mervin A. Schuhart, Los Angeles
H. F. Sherwood, Marysville
E. I. Van Patten, Fresno
L. D. Wanee, San Bernardino
Carl A. Weers, San Francisco
Eugene E. Wekall, Los Angeles
Frank Edwin Wilson, Marysville
Fritz Zapf, Los Altos
Ernest Zube, Sacramento

As Structural Engineer

James M. Fox	Oakland
Glen Hansen Philpot	Burlingame
Henry M. Layne	Long Beach
Clarence E. Rinne	Berkeley
William A. Sanberg	Los Angeles
Edwin A. Verner	Berkeley

As Land Surveyor

William E. Braden	Altadena
Paul H. Hardy	Palo Alto
Elmer W. Lane	Bakersfield
James R. McKenzie	San Jose
L. R. Myers	Mentone
J. Richard Odle	Los Angeles
G. S. Powell	Santa Ana
Harold Turner	Santa Maria

Legislation

Secretary Calahan has prepared a most complete review of certain measures, pending in the California Legislature, which in some manner affect the practice of engineering. The American Engineer regrets that the completeness of the report is such that it cannot be published in full.

In brief the communication which is addressed to the Board of Registration advises that:

"**Gentlemen:**

"I have reviewed the Senate and Assembly Histories, which contains a brief outline of all legislation introduced up to the date of the constitutional recess. I have made a list of all bills, which in my opinion, will be of interest to you, as the administrative agency for the Civil Engineers' and Land Surveyors' Acts, and to the profession in general.

"I am listing the bills below, together with my comments, as to the desirability of the legislation. You have, or will receive soon a copy of each bill which should enable you to reach a conclusion as to the merits of such legislation, regardless of what my comment might be. You will also be furnished a mimeographed digest of the bills affecting the profession. Some of the bills shown below will be excluded from the digest, as they are of no particular interest to the profession."

A.B.	12	Relates to certain mapping duties of County Surveyor.
A.B.	29	Pertains to certain traffic duties of County Surveyor.
A.B.	58	Establishes Post War Reconstruction Commission.
A.B.	178	Provides for certain duties of State Division of Architecture.
A.B.	306	Establishes Post War Fund of $50,000,000.
A.B.	576	Increases Salary of Director of Dept. of Professions.
A.B.	638	Increases expenditures of Board of Supervisors without bids.
A.B.	659	Establishes California Reconstruction Board to develop resources of State.
A.B.	822	Amends Architects Act to allow Contractor certain privileges regarding building plans.
A.B.	946	Provides for dismissal of civil service employees who engage in outside professional plans.
A.B.	962	Directs State Park Commission to establish Shore Line Master Plan.
A.B.	963	Directs State Park Commission to employ Erosion Control Engineer.
A.B.	1153	Provides that engineers engaged for public works shall receive fee based on cost.
A.B.	1154	Same as A.B. 1153 except same applies to architects.
A.B.	1364	Abolishes State Planning Board—transfer records to Department of Public Works.
A.B.	1368	Transfers Contractors License Board to Department of Public Works.
A.B.	1402	Amends Surveyors Act re rosters and partnerships and requires all practicing surveying to be so licensed; provides for civil engineers and waives fees

of Surveyors in Armed Forces.

A.B. 1403 Amends Civil Engineers Act re Board Members, rosters, partnerships, exemptions, architects, complaints, etc.

A.B. 1404 Amends Civil Engineers Act—re definition, exemptions, firms, corporations, etc.

A.B. 1405 Amends Architects Act—Exempts certain contractors but restrains draftsmen.

A.B. 1406 Sets fees to be assessed by County Surveyor for checking plans.

A.B. 1407 Amends Real Estate Act re design of subdivisions and requires Engineer or Surveyor to prepare same.

A.B. 1408 Appropriates funds for Mapping and Surveying Natural Resources. (See A.B. 1412).

A.B. 1409 Establishes Plane Coordinate System. Same permissible only re survey maps.

A.B. 1411 Amends State Planning Act relating to cities and counties.

A.B. 1412 Establishes Division of Mapping and Surveying in Department of Natural Resources.

A.B. 1441 Encourages Post War Construction by establishing Planning Fund.

A.B. 1462 Establishes "Post War Planning Board."

A.B. 1547 Sets aside Zoning Ordinances where same interfere with war work housing.

A.B. 1625 Provides monies of various professional Boards invested in State Buildings shall be returned to Boards.

A.B. 1627 Clarifies Business and Professional Code re registrants in Armed Forces.

A.B. 1870 Relates to State Planning Board.

A.B. 1883 Establishes Commission on Post War Social and Economic Planning.

A.B. 1894 Adds "Associate Forestry Engineer" in Department of Natural Resources.

A.B. 1902 Provides County Surveyor shall be registered Civil Engineer.

A.B. 1903 Increases Land Surveyors renewal fee from $2 to $3.

A.B. 1904 Same as A.B. 1903 except same applies to Engineers.

SENATE BILLS

S.B. 38 Establishes California Loan Value and Mortgage Housing Commission and authorizes bonds for $500,000,000.

S.B. 223 Plans Subdivision Map Act under Business and Professions Code.

S.B. 247-248 Increases to $5000 amount for public works without bids.

S.B. 445 Authorizes appointment of Beach Erosion Engineer—Resembles A.B. 963.

S.B. 459 Amends Subdivision Map Act.

S.B. 483 Encourages local planning for post war construction. Proposes State Fund to assist.

S.B. 657 Proposes registration without written examination for civil service employees having eligibility status in 1930.

S.B. 807 Repeals State Planning Board. Proposes State Economic Planning Commission.

S.B. 816 Same as S.B. 807.

ILLINOIS

1943 Convention Successful

The fifty-eighth Annual Meeting of the Illinois Society demonstrated the timeliness of its theme—"Will it Win the War." To justify the transportation of delegates to and from a convention, it must be shown that the same contributes to the success of the war effort.

Some two hundred representatives from various parts of the state attended one or more of the scheduled sessions. Amongst those who addressed the Convention was Secretary Edward Larson of the National Society of Professional Engineers. The presentation of Harold Richardson, "The new Alcan Highway," was an effective highlight of the annual banquet.

Officers and Directors—1943

Following are the officers, directors and committee members of the Illinois Society and its chapters:

W. W. Wallace, President
J. H. Morgan, Vice-President.

Board of Direction

Alex Van Praag, Jr., Past President
C. J. McLean, Director to 1945
G. H. Anderson, Director to 1947
H. E. Babbit, Secretary-Treasurer

Chapter Representatives

J. E. Weinell, Madison-St. Clair
G. M. Dixon, Lake County
N. H. Gundrum, Capital
D. M. Campbell, Chicago
Arnold Lundgren, Rock River
W. J. Putnam, Champaign County
E. E. Cooper, Central Illinois
O. M. Andres, Egyptian
F. L. Osborn, Illinois Valley
C. M. Noethling, Joliet

KENTUCKY

Elects 1943 Officers

Secretary-Treasurer C. S. Crouse advises that at its recent annual meeting the Kentucky Society of Professional Engineers elected the following officers and directors for the current year:

M. J. McGruder, President, Lexington
E. A. Marye, First Vice-President, Louisville
Joseph G. Hermann, 2nd Vice-President, Newport
C. S. Crouse, Secretary-Treasurer, Lexington
W. D. Barrows, Providence
W. R. McIntosh, Louisville
R. C. Page, London
Joseph B. Wilson, Louisville

MISSOURI

President Owens Appeals

In a statement recently prepared for the Missouri Engineer, the official State Society Publication, President C. P. Owens sets forth the prospects of the Society for the year 1943. *The statement follows*:

"The year 1943 may not become the most important in the history of the Missouri Society of Professional Engineers, but it will be the most critical. During the preceeding years, we have had the all-absorbing interest of working for the passage of the registration law and watching the setting-up of registration machinery. During this formation period we have seen the society grow in number, strength and enthusiam.

"We now face a new period under conditions vastly different. A part of our membership is scattered throughout the world. The remainder is busy with tasks vital to our war effort. Never before have engineers been called upon to do so much. It will be difficult to find time to devote to Chapter and Society affairs, but it is necessary we find that time.

"Restrictions on travel by car, and difficulties of travel by train and bus, are such as to discourage engineers at home who can spare some time for attending chapter, committee, and board meetings. Without these activities providing personal contact, and the absence of many of our most active members, it will be difficult to maintain interest

in the Society. This is likely to result in a serious loss of membership at a time when membership should in reality be growing.

RACE NOT WON

"Now is the time for serious thought by all engineers. This is no time to rest on laurels won. We have not won any race, only the first heat. Some engineers have questioned the need of continuing with the Society. Some have impression that the Society was organized solely to promote and to obtain a registration law. Since that objective has been attained, there should be no further need for a society is the reasoning of some. This line of reasoning is erroneous and can be fatal to all that has been accomplished to date.

"We have a registration law on the statute books of Missouri. That fact is not known to very many people except engineers, and I am sure not even all engineers know. Furthermore, the people who care anything about that law are even fewer. The registration law itself means nothing unless there is some one to see that it is enforced. Individuals cannot enforce a law. The law must have public support and approval. Engineers and architects as a group must see that the public approves and supports that law. That is the job for the Missouri Society of Professional Engineers. If we fail in this now, it would have been better for us to have failed in our first efforts.

"The benefits and results to be obtained from registration will depend entirely on how well engineers plan and work together. What we do individually will matter little. It is what we do as a profession that will count. This can be accomplished best through our Society where we can iron out our individual differences and mold a common opinion which is likely to be more sound and practical. At our chapter committee, and board meetings we can discuss our problems. Here our individual often half-baked ideas and sometimes prejudiced opinions, can be revised, molded and blended with others into sound workable policies. Therefore, our efforts in the past may go for naught unless we continue with our Society and put forth every effort during the next few years, not only to maintain and increase our membership, but to strengthen and improve our organization.

"This duty falls on the shoulders of us who remain at home. We may be busy. We may be faced with transportation difficulties. We may find it hard to maintain interest without the benefit of personal contact at Chapter meetings. These reasons pall when compared with the difficulties faced by many of our members in military service. The men in service are looking for us to carry on during their absence. Our duty should be clear.

REGISTRATION STRUGGLE

"During the past year the State Registration Board has been struggling with the task of registreing architects and engineers. They have encountered some difficulties and unexpected problems. The Board has had to carry on without funds. The legislature passed the law but failed to appropriate the money to finance the Board's activities. State money cannot be spent until appropriated. Consequently, the Board has had to carry on without money, each member paying his expenses out of his own pocket. Regardless of these difficulties engineers and architects are being registered. Each member of the Board is due a steep debt of gratitude from all engineers and architects for carrying on under such handicaps.

"As we proceed under our registration law, we can expect to encounter difficulties. We can expect mistakes and errors and judgment. Expected benefits and results will be slow in coming. Patience, tact, and more hard work will be in order. Time and growth will solve the problems if we will make an effort to grow.

"From time to time we will be faced with problems of enforcing provisions of the law. Many sections of the law will have to be tested in the courts. In matter of enforcement we should move with deliberation rather than haste. First we must see that the public understands and will support the law before any drastic step is made towards enforcement. However, enforcement of our registration law must come eventually. Without enforcement our law is of no value and the public loses out on the benefits and the protection.

SELF EDUCATION

"Before we go further it might be well for us to become throughly familiar with our code of ethics and our state law. A program of self-education among engineers and architects might be of benefit. Certainly we should all have a better understanding of our code of ethics before attempting to enforce its provisions on others. A question and answer program on the registration law and a code of ethics is recommended for all chapters.

"I think we will find that our new registration law must be seasoned and tested by time. I doubt if it is understood by most engineers. Some engineers are not even familiar with most of its provisions except that it costs $25.00. to become registered, they have to buy a seal which is nice to impress their country cousins, and they are supposed to derive certain benefits; just what, how, or when is, of course, not at all clear. It is my prediction that this will be the beginning and the end unless engineers and architects continue to work and act together, constantly improving their own understanding and capacity to work together for the individual's personal benefit.

"All of this will take time and effort far in excess of what we now think, but certainly the Missouri Society of Professional Engineers has yet much work to do. Our Society is the only society that brings together engineers from all branches of engineering where they can meet on a common ground. I hope this article provokes thought and discussion."

1943 Committees

President Owens has compiled the naming of the personnel of the Standing Committees to serve during the current year. These committees have been carefully chosen with the view of both geographical and technical representation.

Ethics and Practice

Chairman R.. P. Cummins, Jefferson City; T. J. Skinker, St. Louis; Francis Kernan, University City; W. E. Gillham, Kansas City; A. R. Waters, Kansas City; J. L. Brown, St. Joseph; Prof. R. O. Jackson, Rolla; Bruce Williams; Joplin; Jack Thorpe, Springfield; Leonard A. Byron, Cape Girardeau.

Committee on Membership

Chairman C. G. Roush, Kansas City; H. L. Ferguson, Jefferson City; F. C. Laufketter, St. Louis; Prof. E. W. Carlton, Rolla; N. H. Bass, Joplin; Oscar Fischer, Springfield; Fred D. Harris, Sikeston; J. H. Beaver, St. Joseph; Warren Barrett, Hannibal; E. E. Zelade, Macon.

Committee on Public Relations

Chairman H. D. Thomasson, Springfield; H. E. Frech, St. Louis; Wm. Anderson, Jefferson City; Wm. E. Barnes, Liberty; John F. Kilpatrick, Rolla; J. Russell Ellis, Joplin; C. Q. Ward, St. Joseph.

Committee on Legislation and Enforcement

Chairman Louis O. Campbell, St. Louis; W. M. Gaylord, Springfield; Edwin L. Espenett, Kansas City; and E. C. Holley, St. Joseph.

Committee on Aims and Activities

Chairman Earl Schultz, Cape Girardeau; Dean Wilson, Hannibal; Leland Davis, Kansas City; Sam Rudder, Jefferson City; Walter Seigerist, University City; R. E. Parsons, Cabool; U. W. Johnston, Joplin; Fred Carr, St. Joseph.

Committee on Resolutions

Chairman E. I. Myers, Kansas City; C. W. S. Sammelman, St. Louis; D. J. Rush, Cape Girardeau; V. B. Saville, Jefferson

City; R. S. Houge, Springfield; C. H. Black, Rolla; Fred Williams, Poplar Bluff; and G. L. Robinson, St. Joseph.

Committee on Chapter Activities

Chairman A. W. Berry, Cape Girardeau; Jasper Everett, Springfield; R. D. Moore, Joplin; M. C. Lytle, Kansas City; Frank Stuckey, Jefferson City; Walter Crecelius, St. Louis; L. B. Rush, St. Joseph; and E. E. Zelade, Macon.

"These committees are appointed by the president in accordance with the Constitution and By Laws. Their activity and service to the Society are part of the democratization of the organization; it is from these committees that the constructive work and progressive growth of the Society should come. It is understood that every engineer is busy with his contribution to the war effort, but the engineering profession must be mindful of the possibility that he will be called on to do a bigger job in the post war area. He must not forget that the ongoing of the profession will be part of that job, and will, through cooperation and professional understanding, contribute to the establishment of a better world."

NEW YORK

Notes of Winter Meeting

The Midwinter Meeting of the New York State Society of Professional Engineers was held in Albany on February 26th and 27th with more than 100 official voting delegates, officers and members in attendance. The wisdom of delegate representation and voting from Chapters was splendidly illustrated. Practically every chapter and section was officially represented and the discussions and decisions of the meeting reflected the views of the entire state. While non-delegate members are welcome, their absence does not prevent a full and complete meeting.

Reports presented by the officers indicated that the Society was in good financial circumstances and had held its own in membership through the year 1942 notwithstanding the departure of so many of its members to the armed forces and to governmental and other defense work. Comparatively speaking war projects in New York are far from being in proportion to those in other states. This is particularly true in the City of New York which still has several hundred thousand unemployed persons. As a result, large numbers of New York Engineers are engaged in civilian capacities in almost every state, as well as in almost every foreign land controlled by the Allied Nations. The membership has been maintained despite this handicap. Approximately two-thirds of all new licencees for 1942 have joined during the year; some of them are not even employed within the state.

As is customary at the Midwinter Meeting, the subject of legislation is of paramount concern. As a result of war, the 1943 legislative program of the Society has been held to a minimum. The only measures sponsored by the Society deal with clarifying and strengthening the existing law so as to prevent further misinterpretation by agencies and individuals. The Society, however, is actively opposing certain measures, sponsored by non-engineers, which are inimical to both public and professional interest. Most important of these is a proposal to compel colleges to grant degrees to any person who enters the Armed forces after three years of normal work and later to grant a license to practice the profession without examination. With the question of granting degrees, the Society has little concern. That is a matter for the colleges. However, the granting of a license to practice law, medicine, engineering and other professions without examination is a serious threat to all professions; one which must be opposed in the interest of the public safety. Doubtless other professions will take this stand. The State Society has already recorded its vigorous disapproval.

Much of the meeting was given over to a discussion of a proposed new constitution. The committee charged with the task presented a concise and well expressed constitution accompanied by a set of by-laws. After much discussion and certain modifications, the proposals were approved and will be submitted by mail to the membership for its acceptance or rejection at the Annual Meeting to be held in May of this year.

The question of publishing the Year Book for 1942 was considered in the light of a request from the publisher who advised that because of war conditions he could not fulfill his contract except at a serious personal loss. Authority to abrogate the contract was given to the Board of Editors of the Publication Committee.

An interesting luncheon meeting took place Saturday, February 27th. Two unusually instructive short addresses were delivered, one on the subject of the newly approved "Engineers-in-Training" procedure by Dr. Conroe, Commissioner of Higher and Professional Education, who was so largely instrumental in bringing the same into being, and the other by Hon. Walker S. Lee, Commissioner of Buildings, City of Rochester whose dissertation on the art of building was a learned presentation of the history of this art from its earliest forms right up to the moment.

Annual Meeting

A tentative program for the Annual Meeting was announced. The dates set were May 7th and 8th, the location Hotel New Yorker, New York. Following is the program as presently conceived:

PROGRAM

Sixteenth Annual Meeting of the New York State Society of Professional Engineers, Inc.

Hotel New Yorker, N. Y., May 7th and 8th, 1943

Friday, May 7th, 1943

12 Noon to 2:00 P.M.	REGISTRATION Delegates, Members and Guests
12:30 P.M.	GROUP LUNCHEON FOR THE LADIES
2:00 to 6:00 P.M.	MEETING OF THE BOARD OF DIRECTORS (If and when scheduled) COMMITTEE CONFERENCES Legislative and Grievance Committee Membership Meeting Ethics and Practice Committee Publicity Committee Resolutions Committee Chapter Secretaries and Treasurers
3:00 P.M.	TEA WITH FASHION SHOW, OR SPECIAL EXHIBIT OR MOVING PICTURES FOR THE LADIES
6:00 to 7:30 P.M.	POSSIBLE GROUP DINNERS INCLUDING THE LADIES (As and if arranged)
6:00 to 8:00 P.M.	DINNER MEETING OF EXECUTIVE BOARD
7:30 P.M.	THEATRE PARTY FOR THE LADIES
8:30 P.M.	ANNUAL SMOKER Entertainment—Refreshments—Smokes

Saturday, May 8th, 1943

9:00 to 10:00 A.M.	REGISTRATION Delegates, Members and Guests
10:00 A.M.	GENERAL ASSEMBLY Membership Meeting Meeting called to Order by President J. F. Fairman Opening Remarks Appointment of Tellers Charge Resolutions Committee
10:20 A.M.	BUSINESS ASSEMBLY Roll Call of Officers and Delegates Minutes of Previous Meeting Communications
10:40 A.M.	REPORTS OF OFFICERS President Vice-President Financial Secretary Treasurer Historian etc.

11:10 A.M.	REPORTS OF COMMITTEES
	Legislative and Grievance Committee
	Membership Committee
	Publicity Committee
	Ethics and Professional Practice Committee
	Patent Committee
	Legal Committee
	"Engineers-in-Training" Committee
	State Civilian Defense Committee
	Constitutional Revisions Committee
12:00 NOON	RECESS FOR LUNCHEON
12:30 P.M.	LUNCHEON, INCLUDING THE LADIES
	Toastmaster:
	Vocal and Instrumental Selections
	Speakers
	Guests
3:00 P.M.	BUSINESS ASSEMBLY
	Reconvening of Business Meeting
	President J. F. Fairman, presiding
3:10 P.M.	UNFINISHED BUSINESS
3:30 P.M.	REPORT OF RESOLUTIONS COMMITTEE
3:45 P.M.	REPORT OF TELLERS
	Installation of Officers
4:00 P.M.	NEW BUSINESS
5:00 P.M.	ADJOURNMENT

Governor Thos. E. Dewey has been invited to address the convention. Further announcements will appear in a future issue.

Engineers in Training a Fact

After more than a year of investigation and deliberation, the Board of Regents has approved an amendment to the regulations of the State Education Department and the State Examining Board whereby candidates for admission to the practice of engineering shall be entitled to take preliminary examinations immediately upon graduation or the satisfaction of alternative qualifications.

This is an accomplishment for which the State Society has striven for a number of years. To Dr. Irwin A. Conroe, Commissioner in Charge of Higher and Professional Education for New York, the Society is greatly indebted for the counsel and assistance that made possible the necessary amendments to the existing rules. The splendid collaboration of the Board of Engineering Examiners merits the appreciation of the profession, as well as that of the Society. Nor would acknowledgments be complete without mention of the courteous and eloquent plea of those young men, members of the student and junior organizations of the American Society of Civil Engineers, who appealed to the New York State Society of Professional Engineers to present the case in their behalf to the authorities.

Thus there has been accomplished with complete accord from all concerned what the Society had incorporated in its legislation of some six years back; legislation which, though passed, was vetoed. Time does resolve many differences of opinion. Some men change, others grow older and sympathy and understanding emerge with the years. Once again appreciation to the Board of Regents, to Dr. Conroe, to the State Board of Examiners, to the student engineers, and, perhaps, the Editor of a national publication will be pardoned for including them, the Chapters and members of the N.Y.S.S.P.E.

Here is the official announcement:

"The University of the State of New York
The State Education Department

"The Board of Regents has amended the Commissioner's Regulations on engineering by adding subdvision f as follows:

f Preliminary examinations for engineers-in-training

(1) On and after June 1, 1943, the prescribed written examinations for license for engineers-in-training, as a professional engineer, shall be divided into two parts: preliminary examinations and final examinations. The former may be taken prior to completion of the statutory qualifications for a license.

(2) After January 3, 1943, the Department shall receive applications for separate admission to the preliminary examinations. The first separate preliminary examinations to which approved candidates shall be admitted shall take place June 1943. Applications must be filed not later than May 1st or December 1st, respectively, for admission to the June or January preliminary examinations of any years.

(3) A candidate for admission to the preliminary examinations must be at least 21 years of age, must satisfy the present citizenship requirement, must have completed an approved secondary school course of study or the equivalent, and must have indorsements of character and aptitude from three or more registered professional engineers who are personally acquainted with the applicant and his record. In addition, the candidate must be a graduate from an approved engineering school or must otherwise satisfy the educational or alternative requirements as specified below.

(4) Graduates of approved engineering schools who satisfy the foregoing requirements shall be admitted to the preliminary examinations if their credentials are found to be satisfactory by the Department.

(5) Candidates who are not graduates of approved engineering schools shall be admitted to the preliminary examinations provided they satisfy the age, citizenship, secondary education, and indorsement requirements, and in addition qualify for eight years of credit for combined educational and experience records. The Department shall evaluate the educational records submitted by candidates. For each year of acceptable engineering education, the candidate shall be allowed two years toward the total of eight years of credit. The applications of these candidates shall be referred to the board for evaluation of the record of experience and said board shall determine whether each applicant has completed the required years of satisfactory engineering experience. To facilitate such verification and appraisal by the board, the applicant shall submit a list of references who are familiar with his record of engineering employment.

(6) Candidates successfully passing the preliminary examinations shall be certified by the Department and recorded for a period not exceeding ten years as engineers-in-training for future qualifications as professional engineers. Four years of satisfactory engineering experience showing breadth and progression, as defined in the published rules of the board, in addition to the prescribed qualifications for admission to the preliminary examinations, shall be required for admission to the final examinations. Candidates failing to qualify for admission to the final examinations within ten years after passing the preliminary examinations may be required by the Department to repeat the preliminary examinations.

(7) Candidates taking the preliminary examinations in advance of final qualifications and failing in either part shall receive no credit until both parts are passed in a single examination period.

(8) The application and examination fee for the preliminary examination shall be $15. Unsuccessful candidates may take the preliminary examination a second time for the same fee. For successful candidates this fee of $15 shall be credited toward the total statutory fee of $25 for the combined examinations and final licensure as a professional engineer.

Memo Relative to Procedure to be Followed On Divided Examinations

(Adopted by Board, February 25, 1943)

1. Applications received from persons for admission to the preliminary examinations who are graduates from accredited engineering courses and otherwise meet the requirements will not be sent to the Board by the Department. The Board will have no information as to such applicants until their examination papers are sent to the Board for marking.
2. Applications received from persons for admission to the preliminary examinations who are not graduates from accredited engineering courses but otherwise meet the requirements will be forwarded to the Board. Before forwarding such applications the Department will evaluate the experience credit to be allowed for formal engineering study and the Board will evaluate the credit for actual work in the engineering field. If the combined experience credit meets the minimum requirements the applicant will be admitted to the preliminary examinations. The application forms to be used by these non-graduates to be the same as the regular forms now in use.
3. Distinctive admission cards are to be given to candidates for the preliminary examination and the answer papers of this group when sent to the Board for marking shall be separated from those taking the examinations for the professional engineering license.
4. The Board will mark the papers of all those entering the preliminary examination and report the marks to the Department and the Department will keep a record of those entering the preliminary examinations, together with the marks received.
5. When an applicant who has passed the preliminary examination meets the experience requirement he shall file another application for admission to the final examination on the form now in use for applicants for engineering licenses. When such applications are sent to the Board they shall be stamped by the Department indicating that the applicant has passed the preliminary examination. As to whether or not an applicant will then be admitted to the final examination is to be determined by the Board in the evaluation of his actual experience record in the engineering field.

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
Bureau of Qualifying Certificates and Professional Examinations

APPLICATION FOR ADMISSION TO PRELIMINARY EXAMINATION FOR ENGINEERS-IN-TRAINING

1, ...
(Type or print name in full)

hereby apply for admission to the preliminary examination for engineers-in-training in the State of New York, and inclose the following statements, evidence, references and fee as required by law.

Date of application ..... *Signature* .....
(Usual written signature of applicant)

STATEMENT

1 Date of birth .....
2 Birthplace .....
3 Legal residence .....
.....

(Attach here securely an unmounted recognizable photograph with face not less than three-quarters of an inch wide.)

4 Citizen of .....
(U. S. A. or foreign country)
5 If not a citizen, have you declared your intention of becoming a citizen?
.....
(Yes or no)
6 Do you speak and write the English language? .....
(Yes or no)
7 To which branch or branches of professional engineering do you belong? .....
(Such as civil, mechanical, electrical, mining, structural, or chemical engineering and/or land surveying)

EVIDENCE OF EDUCATION

(Statements should be plainly printed or typewritten)

Preliminary education .....
(Name of high or preparatory school)
.....
(Years attended) *(Year of graduation)*
Study of engineering satisfactorily completed:
.....
(Name of university, college or technical school) *(Course pursued)*
.....
(Dates of attendance) *(Year of graduation)* *(Degree)*

A college or engineering school graduate must submit an official certificate of his graduation. If not a graduate, applicant must submit official transcripts of secondary school training and of any collegiate or engineering study completed.

This certifies that I have been personally acquainted with ..... since the year indicated opposite my name; that I have read his foregoing statements, which so far as known to me are correct; that I believe him to be of good character and repute; and I hereby recommend him to the Regents of the University as entirely worthy to be admitted to preliminary examination for engineers-in-training in the State of New York pursuant to law.

NAME	P. O. ADDRESS (Including street and number)	HAVE KNOWN APPLICANT SINCE
.....	.....	.....
.....	.....	.....
.....	.....	.....

(Signatures are required above of not fewer than three citizens unrelated to applicant, who must be licensed professional engineers.)

AFFIDAVIT

STATE OF NEW YORK
COUNTY OF ..... } ss.:

..... being duly sworn, says that he is the person who is referred to in the foregoing application for admission to the preliminary examination for engineers-in-training in the State of New York; and that the statements and representations therein contained are true in every respect.

Sworn to before me this .....
day of ..... 194 .....

.....
(Signature of applicant)
..... *Justice of the Peace*
Notary Public
Commissioner of Deeds
(Cancel titles not applying)

OHIO

Reports on Activities

The Ohio Society of Professional Engineers Committee on Publications continues its role as the most efficient and reliable transmitter of news to the American Engineer. An Editor's task is made much lighter by cooperation such as Ohio has extended in the matter of reporting its activities.

Next issue—legislative report just received

1943 Annual Meeting

Following is a digest of the Annual Convention of the Ohio Society and the meeting of the Board of Trustees as prepared by the Publication Committee:

"The 1943 annual meeting of the Ohio Society of Professional Engineers in Columbus was called to order by President J. S. Kennedy at 3:55 P.M. February 12, 1943 with representation present from all parts of the state.

"Reports presented and received for filing

"Report of the President—President Kennedy advised that he had attended 18 chapter meetings, 16 as a speaker, and seven non-chapter meetings. During the year the Ohio Northern Chapter was revived and the Miami Professional Engineers Club was admitted, thus covering the entire state. Membership, with 1556 in good standing, represents a gain

of 18% during the year. He referred to various achievements of the Society, thanked members and officers for their cooperation, and expressed confidence in continued progress.

"Report of the Treasurer—Treasurer Tucker stated that the Society was solvent, with a net gain of $1856 including a $500 bond, thus making total assets of $3241. The auditor's report, on file, showed that the accounts were correct. Treasurer Tucker recommended that the Society have a free balance of about a dollar per member, and equal amounts in both savings account and bonds.

"As Membership Chairman, Engineer Tucker reported 1540 active members, a gain of 18%.

"Legislative Committee Chairman Waid advised that identical bills, H.B. 69 and S.B. 37 had been introduced covering revisions to the Registration Act. Other bills for salary adjustment have been presented. Extra copies of the bills will be printed for the O.S.P.E. and sent to the chapters for discussion.

"Professional Practices Committee—Member John F. Hale spoke of the adoption of Application No. 9, putting the engineers on record against endorsing products as advertising. He said that the matter of changing the consulting per diem from $40 to $50 had brought two replies, one for and one against. Kammerer moved, Finkbeiner seconded that this matter be referred to the Board of Trustees. Motion carried.

"Chapter Relations Committee Member E. H. Fox reported that every county is now covered by the O.S.P.E. Details of organization may be obtained from the Secretary of the Society.

"Chairman Lloyd Chacey of the History Committee reported the Donation by Engineer Fred Cellarius of bound volumes of O.S.P.E. reports through 1901 and 16 subsequent reports in paper bindings. Other reports were mentioned as being available at Ohio State University and at Norwalk. The committee recommended, that:

All material, of a historical nature in the O.S.P.E. office and donated, be bound:

An annual report be published and sent to the members;

Reports that are missing be mentioned in the Bulletin so that members can send them in;

The need of preserving records be kept in mind.

"President Kennedy reported the donation by Past President Kammerer of a framed copy of certain documents to the O.S.P.E.

"Violations Committee Chairman Finkbeiner reported only a few instances during the past year of unauthorized use of the term 'engineer' and no pending cases.

"Membership Trophy Chairman George Kerr reported the rules for determining the winner of the trophy. Owing to lack of data the committee could not give a final statement. The report will be announced later in a bulletin.

"The Resolutions Committee presented a number of resolutions. Members may obtain copies by writing to the O.P.S.E. office in Columbus. Their titles are as follows:

1. Resolution Paying Respect to Deceased Members
2. Resolution on National Society Dues for Members in the Armed Services.
3. Resolution Requesting Authority from the N.S.P.E. for a Study of the Salaries of State Highway Officials and the Organization of State Highway Departments of the Various States of the Union.
4. Resolution of Commendation and Thanks to Engineer Arthur V. Sheridan, Editor of American Engineer, and staff of the American Engineer.
5. Resolution on Planning a Post-War Program of Public Works.
6. Resolution Dealing with the Cost of Living Index Adjustments of Engineering Salaries.
7. Resolution on the Proposed Amendment to Section 7181 of the General Code of Ohio.
8. Resolution on the Roster of Registered Professional Engineers and Surveyors of Ohio.
9. Resolution Thanking the Various Parties Who were Instrumental in Making the Annual Convention a Success.
10. Resolution on the Accomplishments of the O.S.P.E. under the Able Leadership of J. S. Kennedy.

"Report of the Tellers—Chairman Gebhart of the tellers announced the following officers elected for 1943:

President, Walter W. Graf, Lancaster.

Vice Presidents, Edwin H. Fox, Cincinnati, T. W. Rolph, Newark.

Treasurer, Prof. J. R. Shank, Columbus.

Secretary, Herbert N. Morris, Sandusky.

"*New Business*

"Invitations for the 1944 Convention were received from the Cincinnati and Columbus Chapters. The invitations were referred to the Board of Trustees for action at a later date. Chapter reports were presented by officers and directors.

"Engineer Ed Haseltine of Youngstown, presented as the dean of engineers of Ohio, said that he will be 85 on Flag Day and that he joined the O.S.P.E. in 1886. Engineer Fred Cellarius, who joined in 1890 and became secretary in 1900, said he thought the Society was in good hands. He expressed interest in the issuance of reports of the annual meetings, and announced that he was presenting three bound volumes of reports through 1901 and 16 unbound volumes to the Society. Engineer Haseltine announced that he had given reports of the Society to 1903 and exchange reports at that time to the Ohio State University and that they are available there.

"Past President Kammerer, retiring from service on the Executive Committee, expressed delight at the Society's growth and appreciataion of the service of President Kennedy during the past year.

"Engineer Kennedy, expressing appreciation for the cooperation he had received during the year, mentioned the gavel, a gift from Engineer Flatman. As indicated on a metal plate, the handle is native oak and the head is apiton, a Philippine mahogany.

"Engineer Kennedy was extended a rising vote of appreciation for his efforts during his term as President."

President's February Letter

"Fellow Member of Ohio Society of Professional Engineers:

"Permit me, in this first official communication, to express to you my sincere appreciation for the honor you have conferred upon me in making your selection of a president for the Ohio Society of Professional Engineers for the ensuing year.

"I am grateful to you for this expression of confidence and assure you that I shall do my best, with your united support, to continue the progress of O.S.P.E. during the coming year.

"All of the eighty-eight counties of Ohio are now covered by a Chapter of O.S.P.E. and with a little work by each one of our 1556 members with approximately 8800 eligible Engineers in our State we could build, this year, the strongest professional organization in Ohio. In addition thereto, with the same effort, we could step into first place in strength of N.S.P.E. membership in the Nation.

"In the near future we will announce the personnel of the new Committee on Membership. This committee will have a member representing each of the 27 chapters in the State and I assure you the Chairman will have a 'Program of Progress' for the year ahead.

"May I request and urge that each member immediately acquaint himself with the provisions of Senate Bill #37 and its companion House Bill #69 and write or call your Senator and Representative asking their support of this bill which will further strengthen the position of the Registered Professional Engineers in Ohio. Please consider this a personal assignment as only in this way will we be able to obtain passage of this important piece of legislation at this 'War Time Session'.

"Every member of this organization has at some time in the

past expressed some ideas as to what the Society should do. Please transmit these suggestions to your trustee of O.S.P.E. so that he may bring them to Columbus for consideration at our next meeting of the trustees which will be held on March 12th.

"Please give these matters your immediate consideration as I am looking forward to working with you and for you and, I assure you that with your full cooperation we shall make progress in spite of the handicap of this war into which our country has been drawn by our enemies."

Cordially and Sincerely,
Walter W. Graf, President

Publication Committee Report

"Dear Fellow Engineers:

"The War Conference is over. It was a success. Considering transportation difficulties and other deterrents, the registration of over 300 was excellent. The ladies came in greater numbers than ever before and enjoyed their part of the proceedings.

"E. J. Bisiker, British Vice Consul of Cleveland, described the devastation he saw in London after the Blitz, and expressed admiration for the work of engineers in maintaining transportation and production. We have a great advantage over here in not having to disperse our factories for fear of bombings.

"S. S. Wyer gave a stimulating set of specifications for the post-war world based on a recognition of the individual.

"The high point of the convention was the banquet address, with the aid of pictures, on the building of the 1800 mile Alcan highway, given by H. W. Richardson, western editor of the Engineering News-Record. The scenery made all wish to take a drive to Alaska; one more reason for wanting the war to end quickly.

"The grand old engineer of Ohio Northern, Tommy Smull, was guest of honor at the luncheon on the 12th, and was the recipient of a, portrait of himself. The occasion was his retirement. Tommy is remaining active, though, on a job at the Ohio Department of Highways.

"New President Walter Graf took the gavel with an assurance that augur well for a successful administration. New vice presidents are Thomas W. Rolph of Newark and Eddie Fox of Cincinnati. The Treasurer is J. R. Shank of Columbus, and the Secretary is Herb Morris of Sandusky. Retiring Prexy Kennedy and Past President Kammerer were the surpised and pleased ecipients of watches presented at the banquet.

"Treasurer Shank, unfortunately, was ill and not able to be present. National Director Nold was in the hospital recovering from anoperation, as was L. F. Kielsmeier of the Springfield Chapter. We wish them all a speedy recovery.

"The February Board Meeting was attended by many of the members. Enclosed are the minutes and a brief resume of the Annual Meeting."

Ohio Northern U. Reunion
For Dr. Thos. Smull

An informal testimonial to Thomas J. Smull, retired Secretary, resulted from the presence of such staunch supporters of Ohio Northern and its former recorder as Perry Ford, Past President of N.S.P.E., Judge Edward Mathias and many others who participated in the luncheon on February 12th. Dr. Smull is still active with the State Highway Dept. and promises more of his time and effort to the professional society movement.

Springfield District

Secretary Herman Steiniger of the Springfield District Chapter advises that the officers for 1943 are:

President—Glen Muffly, 132 S. Kensington Blvd., Springfield, Ohio.

Vice President—Mayer A. Griswold, Court House, Urbana, Ohio.

Vice-President—George Ackerman, 149 Hill St., Xenia, Ohio.

Secretary—Herman Steiniger, 521 So. Fountain Ave., Springfield, Ohio.

Treasurer—Chas. Bryant, 102 E. First St., Springfield, Ohio.

Toledo Society

The recent gathering held in connection with the presentation of a plaque in commemoration of the Engineering States Achieval by the University of Toledo was an unusually well attended affair. The Ohio Society and its Chapter in Toledo joined with representatives of Engineering, Education and Industry in commemorating the occasion. An address by Col. Ivan C. Crawford, Dean of the College of Engineering at the University of Michigan, was the feature of the dinner. The paper is printed on page — of this issue. of THE AMERICAN ENGINEER.

PENNSYLVANIA

Annual Meeting Notes

According to Sparks, the official Bulletin of the Harrisburg Chapter, nine Chapters were represented at the Executive Board Meeting.

The membership in the State Society is close to 800, with 111 new members enrolled in 1942. Although both Reading and Midwestern Chapters achieved 100% in their quota drive, the silver engraved plaque donated by President Ritchie Lawrie, Jr. was awarded to Midwestern for having first reached the set objective.

The address of President James F. Fairman of the New York State Society was a forceful and forthright exposition of the relation of the engineer to the professional movement. Printed on page 9 of this issue of THE AMERICAN ENGINEER, all engineers are urged to read the same.

According to the "Pittsburgh Engineer" the 1943 meeting was one of the most successful ever held.

Officers for 1943
(As given in "Sparks")

President—Ritchie Lawrie, Jr., Harrisburg Chapter
Vice-President—Robert V. Hudson, Philadelphia Chapter
Vice-President—Samuel Banker, Northeast Chapter

NOTE: The report of the Pittsburgh Chapter lists the following:

President—Ritchie Lawrie, Jr., Harrisburg
Vice-Presidents—Samuel Baker, Scranton; Robert V. Hudson, Philadelphia; J. J. Paine, Pittsburgh; Hale Sutherland, Bethlehem
National Director—Robert Hall Craig, Harrisburg; Ritchie Lawrie, Jr., Harrisburg
Executive Secretary—Russell S. Conrad, Harrisburg
Treasurer—Walter E. Witte, Philadelphia
Assistant Treasurer—Alfred A. Townsend, Philadelphia

The American Engineer is at a loss to account for the discrepancy between the reports of Sparks and The Pittsburgh Engineer.

Chapter Presidents and Secretaries

Russell S. Conrad, Executive Secretary of the Pennsylvania Society, transmits the following which it is suggested be noted by those interested:

Harrisburg Chapter
Victor J. Snyder, Pres.; C. Fred Germeyer, Sect'y
Johnstown Chapter
R. G. Pfahler, Pres.; Warren H. Hinks, Sect'y
Lehigh Valley Chapter
Hale Sutherland, Pres.; Paul G. Busck, Sect'y
Midwestern Chapter
W. Leslie Wilson, Pres.; Lawrence Spalding, Sect'y
Northeast Chapter
H. H. Otto, Pres.; E. H. Edwards, Sect'y
Philadelphia Chapter
Ray M. Fuller, Pres.; Albert P. Kouba, Sect'y
Pittsburgh Chapter
Earl S. Fenelon, Pres.; Benjamin H. Aires, Sect'y
Reading Chapter
Irvin Wm. Blemker, Pres.; Irvin H. Hafer, Sect'y

Philadelphia Chapter

A brief report of a meeting from J. E. Smith of the Publicity Committee reached the American Engineer just too late for the last issue. An anticipated departure (which did not materialize) by the Editor of the American Engineer compelled closing the February-March issue a week in advance of previous closure dates.

Apologies to Philadelphia Engineer Smith and Engineer Conrad! Thanks for the cooperation!

Harrisburg Chapter

To Use Films at Meeting

The following notation from "Sparks" indicates that feature programs and pictures are in store for the 1943 meetings:

> "Your General Program Committee intends to provide first-class, outstanding feature pictures and programs for the monthly meetings. Do your part by attending meetings."

President Appoints Committee

The following committee chairmen have been appointed by President Snyder with the request that each chairman select his committee:

Associate Engineer for Juniors—H. S. Mattimore
Auditing—Harold G. Van Riper
Civilian Defense—Frank C. Class
Employment—C. Fred Germeyer
Ethics and Practice—Irvin H. Geiger
Legislative—Robert Hall Craig
Membership—George A. Rahn
Meetings and Attendance—H. R. Moffit
Program and Entertainment General Chairman—Victor J. Snyder
Public Relations—D. Paul Witmer
Publications—Guy R. Johnson
Publicity—Warren K. Myers
Registration—Kenneth H. Caskey

The following chairmen have reported their committees:

Publicity Committee: Warren K. Myers, Chairman; William E. Bailey, Upper Darby, Pa.; William S. Hammaker, Harrisburg; Robert W. McCulligh, Harrisburg; Frank M. Masters, Harrisburg; Thomas A. Monk, Jr., York; W. W. Seltzer, Harrisburg; H. G. Van Riper, Carlisle; Edwin S. Wagner Hershey; Herbert K. Dodge, Camp Hill; Charles F. Johnson, New Cumberland.

Publications—Guy R. Johnson, Chairman; Henry Blanchard (Vice Chairman), Lemoyne; J. D. Carpenter, Carlisle; Karl L. Gatter, Camp Hill; Harry N. Herr, Hershey; Armand E. Keeley, Harrisburg; John H. Wickersham, Lancaster; Edgar W. Zieber, York.

Pittsburgh Chapter

Officers, Directors, Chairmen

The Pittsburgh Engineer, official Bulletin of the Pittsburgh Chapter, advises that the Officers and Directors for the current year are:

President—Earl S. Fenelon
Vice-President—Martin C. Knabe
Secretary—Benjamin H. Aires
Treasurer—Raymond I. Lachman
State Director—John R. Shoffner
Directors—Karl W. Atwater, H. S. Ayres, George T. Bruun, Charles A. Finley, Rudolph Janata, T. J. Mitchell, John M. Rice

The Chairmen of the Standing Committees are:

Administrative—Earl S. Fenelon
Entertainment—George M. Levinson
Ethics and Practice—Nathan B. Jacobs
Legislative—Charles A. Finley
Membership—Phil A. Franklin
Meetings—Philip W. Price
Public Relations—F. H. Hecht
Publications—Roswell Canfield
Remuneration and Classification—J. J. Paine

TEXAS

Holds Annual 1943 Meeting

Chairman Trigg Twichell forwards a brief summary of the Seventh Annual Meeting recently held in Austin.

In keeping with the mood of the times, the 1943 gathering was a streamlined one attended by some fifty delegates from the several Chapters of the State. To quote from Engineer Twichell's report:

> "The one-day meeting condensed a number of professional and administrative problems in an orderly manner. Quick but sound action was taken on all of them. The noonday luncheon, at which W. R. Woolrich, Dean of Engineering, University of Texas, spoke was the only social function, and the major portion of that period was devoted to the speaker's address on *Post War Planning* and to a free discussion of the subject by members.
>
> "The effect of unionization on the Professional Engineer is beginning to concern a large number of licensed practitioners, and the subject received considerable discussion. Engineer A. F. Mitchell stated that employees of a certain large company are now considering complete unionization of the personnel. This may force the professional engineers of the concern to join a labor union. President Warden was instructed to appoint a special committee to study this urgent problem, and submit its report without delay.
>
> "The Texas Society has now passed adolescency. As Secretary-Treasurer for the past seven years, Engineer R. S. Guinn has been the back stage operator. His untiring efforts are greatly responsible for the prestige the State Society now holds. One hundred nine new members and five juniors were elected in 1942. The duties of the Secretary-Treasurer have expanded beyond the services of a voluntary officer. Because of this fact, and in order to enlarge the membership more rapidly, it is now necessary to provide a full-time Secretary. However, present cash returns from the membership dues will not sustain the full-time services of a Secretary-Treasurer. It was made known at the meeting that several members and friends of the Society would contribute liberally in money for such services, and preliminary plans were formulated for raising the necessary funds. President Warden will execute final plans to properly finance the Society during 1943, without obligating the Society beyond its available cash. The membership will be more fully informed regarding this matter in the near future.
>
> "Newly elected officers and directors of the Texas Society are: President, T. B. Warden, Austin; 1st Vice-Pres., Irwin A. Uhr, San Antonio; 2nd Vice-Pres., C. W. Mier, Dallas; National Director, R. B. Cruise, Beaumont; Directors, T. E. Huffman, Dallas; Wilder Kenan, San Antonio; H. N. Roberts, Lubbock; and Trigg Twichell, Austin."

WEST VIRGINIA

Society Sponsors Merit Bill

From the West Virginia Engineer comes word that:

> A bill to provide for the employment and promotion of engineering and other technical employees by State departments on a merit basis has been introduced in the Legislature and has the support of the West Virginia Society of Professional Engineers.
>
> The bill, as written, does not incorporate the well-known features of a Civil Service Act. There is nothing in the bill which guarantees a tenure of office or prevents discontinuing the services of any such employee. It does establish the qualifications that an engineer or other technical employee shall have in order to be eligible for appointment to certain positions.

* * * * *

The State Board of Registration for Professional Engineers is set up as a rating board to determine and certify to the qualifications of engineering and other technical employees. Each applicant would be rated in one of nine various groups set up in the bill. The qualifications for each group are based on education and professional experience.

Technological Mobilization

Interests West Virginia Engineers

The reintroduction of Senator Kilgore's Bill for the Mobilization of Science and Technology has aroused considerable interest among Engineers of this State. The Senator, a West Virginian himself, has invited members of the Society to secure revised copies of the measure and to submit recommendations for changes. (The proposals are referred to under the heading of General News in this issue of THE AMER.CAN ENGINEER.)

West Virginia, because of its unusually large number of scientific and technical men, is particularly interested in the proposals and members of the Society are urged to review it.

Post-War Prospects of Engineering

(*Continued from Page* 11)

thirties. Too many engineers; too many of all classes of our population. Slowly the situation began to improve. In 1930 the colleges enrolled approximately 73,000 students; 66,500 in 1935. The number had increased to 110,000 in 1941.

Suddenly we have discovered that there is no other professional man so greatly in demand in the present emergency as the engineer;, also, that an engineering education better fits a man for industry and the armed services than any other type of education. There isn't anywhere near the supply available that the situation demands. In one of the technical branches of the army, men recently commissioned had the following educational qualifications; 8% had technical degrees; 30% had college degrees of some type; 30% with one or more years of college; 25% who were high school graduates without college training; and 7% with a formal education which did not extend into high school. In another technical service of the United States Army the average educational attainment of newly commissioned officers is one year in college. The situation is the same as it was in Washington's time—engineers must be made available for military duty immediately, not at some time in the future. But industry must also have a share. Totalling up the demands we find that there are not enough engineers to meet the demand.

The Future

Do we have an engineering profession? What is it? I think this definition of profession is good: "A calling has become a profession (1) when one acquires a fund of special, organized learning and a training in applying it; and (2) when it recognizes above each member's responsibilities to his client, his colleagues, and himself, is his responsibility to the public." Engineering qualifies. The profession of engineering is further defined in the following quotation: "Since the engineering profession clearly cannot isolate itself from this complex of men and functions in a well-defined caste, it may be said to exist as a vaguely bounded nucleus within a much larger enveloping group which one may call the engineering fraternity."

Will the engineer emerge from the war as a leader? Not necessarily. He has the type of education and training which helps him to execcise leadership, but his desires and personal characteristics may say no. He may be an outstanding man in his profession, a leader there, but have no desire to influence public opinion on general issues. He doesn't want to be a leader in this general sense. You will find many engineers in such a frame of mind. Undoubtedly, during the past twenty or twenty-five years, a larger percentage of engineers have recognized the opportunities and obligations involved in public service and have become interested in the field. Throughout our history, engineers have been leaders, especially in times of emergency. In the Civil War many were outstanding military leaders. Two of the greatest faced each other at Gettysburg,—Robert E. Lee and George Gordon Meade. In this emergency the engineers in high places in the armed services are legion. In addition, in the government and in industry the engineer is carrying the load,—to a large extent. The reconstruction period should furnish him with further opportunity to demonstrate his ability to serve the state with intelligent leadership.

But what of the opportunities for professional work after the war? Over the years we are becoming more and more an industrial nation. The swift change of our industry from civilian enterprises to war activities brings forcibly to mind the part industry plays in the American way of life. Does any one doubt that it will be more important than ever after the war? Without doubt the national economy will call for increased numbers of engineers after the war since industry cannot develop and operate without them.

We can't blueprint the future and tell you that in 1952 there will be a certain number of engineers graduatd and no more. We are not able to forecast the future with such certainty. Furthermore, we do not know how many of us will be using our professional training in other fields. All indications point to wider professional fields for all kinds of engineers and in addition the more general use of men with engineering education in a wide variety of other activities.

Engineers find technical employment in operation, design, research, selling, and management. Can any one doubt that many more opportunities will be opened for aeronautical engineers in the future? The post-war industry will without doubt be more extensive than that of pre-war days.

Chemical and metallurgical industries will afford more room for engineers. Industries in rubber, alloys, petroleum, plastics, etc. will develop to an extent dependent only on the ability of the American people to consume.

Civil engineers will look forward to highway programs; public works such as water supplies, sanitary works, buildings, flood control; public utilities; construction work generally; and government servcice. The electrical field is widening under war pressure. The return of peace will find programs of expansion and delayed maintenance for public utilities, railroads and manufacturing companies.

For mechanical engineers, the future looks especially promising. Expanded industries call for his knowledge and experience in the manifold divisions of the field.

More and more engineers will be found in management. Data collected by a national educational society fifteen years ago showed that sixty-five percent of engineers were in executive work within thirty years after graduation. This tendency appears to have increased in recent years.

The field of engineering is expanding. All indications point to a continuance of this growth and with it, of course, a demand for more engineering services. In speaking of Sir Henry Wilson, Lord Tweedsmuir said, "He had a gift, too, of making a situation more clear than God intended it to be." Probably, through lack of ability to see clearly into the future, I may have erred in the same manner. Howevr, so long as the public has confidence in the engineering profession, the future of engineering is secure.

The records of the past show that our profession has been developed and led by many able, vigorous men. To the engineers of today and tomorrow they have bequeathed honorable reputations and traditions. They have performed valiantly, and like Valiant may well say: "My sword I give to him that shall succeed me in my pilgrimage, and my courage and skill to him that can get it. My marks may be done and scars I carry with me, to witness for me that I have fought His battles who will now be my rewarder. May we be able to pass along to our successors the professional traditions of engineering with the same calm assurance.

The Professional Organization

(*Continued from Page* 10)

satisfactory evidence of fitness and having completed the preliminary, professional and all other requirements prescribed by law, was examined and found duly qualified to receive this license to practice professional engineering in the State of New York."

While this statement may be similar to that appearing on the license in other States, there is at present no assurance that the qualifications are equal.

In order to bring about uniformity there must be united effort and The National Society of Professional Engineers is striving to develop and promote uniform legislation.

Engineers must see that the license laws are enforced. Enforcement is not the province of the State Examining Boards that grant the licenses, but the responsibility of Engineers. It is the job of the engineering profession to police itself. The accomplishment of this is another of the objectives of the National Society of Professional Engineers.

In order that the profession may achieve the high position and public esteem to which it is entitled, engineers must constantly raise the minimum requirements of education and practice. In fact, engineers must never be satisfied with any standard of excellence, bust must constantly work towards higher levels of knowledge, ability and accomplishment. They must aim high, but must also keep their feet on the ground and be certain of that ground. They must eliminate the factors of ignorance which are dangerous to life and property and wasteful of national resources and the capital of clients. To raise the minimum requirements of education and practice requires united effort, and here again it is the National Society of Professional Engineers which has taken definite steps toward this goal.

The National Society of Professional Engineers has a program to assist the young men who are seeking to enter the profession and desire to make of it their life work. Toward such end the Society is seeking to establish in the various states an orderly procedure whereby these young men can, on graduation from a technical course at the university or college, move forward through his apprentice or training period in such manner that he may, at the end of that period, obtain his license to practice and thus become a legally qualified member of the profession. As a direct result of its professional society efforts, this procedure has recently been placed in operation in the State of New York. (SEE ELSEWHERE IN THIS ISSUE). In that State the young graduate who wishes to practice engineering may take his preliminary examination as soon as he gets his degree. Assuming that he passes this examination, he then becomes an "Engineer in Training". He may be invited to attend society meetings, may receive the American Engineer, should benefit by professional contact and can obtain guidance in the practical training and experience necessary to pass the second part of the examination and thus qualify for his license.

Another and most important function of the National Society, and its affiliated state organizations, is to watch proposed legislation affecting engineering in the National Capitol, as well as in the various States. This is a very practical service. It is the kind of protection that is rendered by the American Medical Association in guarding the public health and by the American Bar Association in guarding the legal structure of our country. One illustraiton of how this is being done is offered in conclusion. A year or so ago legislation concerning the coal mining industry was before the National Congress. The bill provided for inspection of coal mines in order that proper safety measures might be taken. It described the requirements for mine inspectors, as follows: "Five years experience in coal mining." Not a word about technical qualifications was included. Representatives of the National Society appeared before the Congressional Committee which was holding hearings on the bill and urged that it write into it the requirement that mine inspectors must be legally qualified Professional Engineers. Although unable to have this requirement completely included in the measure, they were able to have it modified so that the mine inspectors must, in addition to their mining experience, have a certain amount of technical education. That was public service of a high order. It was directed toward the protection of life and property and the writer can testify from personal experience as to how important such service is, having spent two years in the coal mines. He witnessed a catastrophe wherein one of these mines blew up and killed every living thing within it, including 200 men. That explosion was caused by ignorance and carelessness; ignorance on the part of the engineering profession too, because at that time it was not generally known that most of the disastrous coal mine explosions are due to dust rather than gas detonations. That fact was discovered soon after the incident mentioned and appropriate measures taken to prevent further similar disasters. One can readily appreciate the importance of having properly qualified engineers to perform mine inspection work. And one may also hope that both public and profession will appreciate the importance of having a united engineering organization on the job to see that proper safeguards and qualifications are written into all laws affecting the practice of him whose role it is to point the way to a safer and more satisfying civilization.

Housing After The War

(*Continued from Page* 12)

to envision and initiate with some degree of assurance.

During the depths of the last depression when Engineers along with so many others lacked employment a certain group concerned itself with seeking a means of eliminating non-technical persons from the building industry. Engineers at the meeting pointed out that many notable structures had been built under the aegis of manufacturers of millinery and other wares, and by dealers in many commodities none of whom was in anyway connected with building. These Engineers were asked why they had not used their own initiative and organizing ability to promote and construct. They had to admit that the persons criticized manifested an organizing and executive ability that included hiring the Engineers' brains to do their bidding. The amateur builders had courage enough to envision and undertake; the professional engineer did not.

Until quite recently housing in general was a haphazard industry with no large scale planning. In the past the practical builder, aided to some extent by trained Architects, produced most of the mass housing. The initiation of projects usually came from these practical builders or from promoters. The Architect's role was principally that of a hired or commissioned agent. He, too, was retained to draft and specify the work proposed by others. In rare instances Architects conceived, promoted, and executed notable housing jobs. In even rarer instances housing jobs were conceived and executed by Engineers. Both professions lacked initiative.

Prior to recent times, housing consised generally of simple, and often crude, dwellings for families in the lowest level economic state and, somewhat infrequently, of more pretentious houses for the privileged few. Later, multi-family dwellings, generally non-fireproof up to six stories in height, and more recently in large cities multi-story fireproof dwellings of greater height, usually for those in the higher economic groups, came into being. In the past decade, more than in any other period, large group housing developments, planned for healthy and comfortable living, have been projected and built. The present trend in housing is toward large projects. This trend should bring the industry more and more within the scope of the Engineer's professional practice.

Through the labors of public spirited citizens the Zoning Law of New York City was adopted in 1916. In the succeeding decades many municipalities approved zoning acts patterned after those of New York. The principle of zoning or restricting land use to specific purposes has helped to focus attention on the need for improved housing conditions. This increased interest has led

to large scale planning. Urban development laws, economics and other factors are being increasingly applied.

Much has been written on the subject of housing in other lands. The Federal Government, through the Federal Housing Administration, has issued numerous handbooks and monographs. The Division of Foreign Housing Studies of W.P.A. made investigations of conditions in France, England, the Soviet Union, Denmark, Spain, Italy, Chile, Argentine, Germany, Holland and other countries. Publications giving descriptions of site selections, planning processes, construction methods, building plans, economic surveys and social studies are presently available. These publications are replete with information on slum clearance, housing repair, redevelopment of areas, grants, subsidies, acquisition of property, administration of programs and many other subjects related to housing. There are also available bibliographies which afford encyclopedic information on the topic. The Architectural Forum recently issued a "Reference List of Prefabrication" citing detailed studies of housing of this type which appeared in the Forum between 1932 and 1942. The exigencies of war are even now providing a laboratory for developing other and newer housing techniques.

Unhappily the war, though providing such a laboratory, has effectively stopped many projects and has delayed much new site planning. For many great and novel developments in housing, however, the groundwork has already been laid. If available resources, initiative and data are applied after the war, when the potential labor will return hungry for work, there will be unparalleled activity and progress in housing. In the days to come the Engineer will have only himself to blame if he is not a prime mover in the vast post war housing programs which are in the offing.

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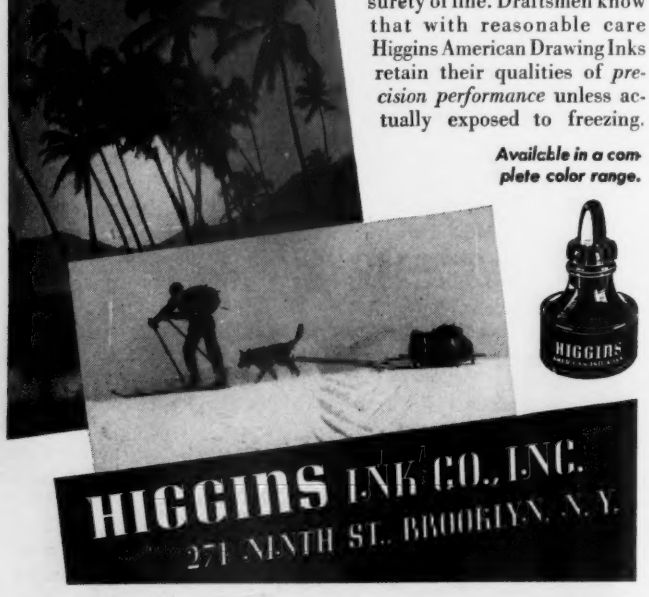

Why Membership In N.S.P.E.?

(*Continued from Page 9*)

society which has a place in the sun. We are concerned solely with our common professional problems and there is all the room in the world for those societies whose primary interests lie in the several fields of technical specialization. Each of us in active practice needs membership in one or more of those societies. It is no derogation of their type of organization or field of service to say that it is difficult for any group of autonomous societies to function expeditiously on matters of common interest. Experience seems to have demonstrated that fact. The reason I became a member of this society was because I felt it was organized to do a job which needed doing and which was being accomplished, if at all, with painful deliberation by the older professional groups. However, this is still a painful subject with a great many fine people and it seems to me that we have an obligation on our part to handle ourselves in a way which extends to the other societies the utmost of courtesy and consideration, even though that may not always be returned by individual members of those groups. As I see it, there is no essential conflict between them and us. There is a place for each type of organization, each should supplement the efforts of the other and we should be able to live together in harmony and understanding.

I believe we have objectives and a program of vital interest to every practicing engineer. I believe we can sell that program to, and that we can enlist the active support of, more members of our profession. I believe we can and should do it without making inroads upon the membership of any other organization and without competing with them for new members.

There are two reasons why mere numbers of members are important. The first is that if the society is to be a really effective influence for the welfare of society as well as of the profession, it must be truly representative of the members of the profession and hence should have a majority of the practitioners in every branch of professional activity. Until that happy day arrives, your elected leaders are handicapped in making representations in the names of the profession. The second and very obvious consequence of a larger membership is a larger income which is absolutely essential if your society is to do any substantial number of the things which it is trying to do. As long as we depend primarily on the time and effort of volunteer workers, we can set a pace only as fast as their time and energies permit. There is no question in anyone's mind, I believe, that we need an office and adequate staff not only in Washington but in every state of the Union. Only by the employment of competent full time personnel can the work proceed as we should like to have it. Just the matter of keeping an eye on legislation affecting the practice of engineering is so large an order that I marvel at what our volunteer workers have accomplished. We need a national membership roster which should be published annually, and that is no job for volunteers no matter how willing or how competent. We need a full time editorial staff for our national magazine. These are only a few of the obvious things which a professional society must have if it is going to do its job, and these things take money.

During the past several months, I have had the privilege of sitting in as a member ex officio of the New York State Society's Committee on Constitution and By-Laws which has been busily engaged in removing ambiguities disclosed by experience and in clarifying and strengthening the basic rules for the conduct of the society's work. Participation in that work has caused me more intensively to think about the relations between the individual member and his chapter, his state society and his national society, and between the chapters and the state societies and the national society. I believe we can well afford to give some study to these relationships because of the bearing they have upon our chances of becoming the most effective representative group of the whole profession. I have come to no hard and fast conclusions, but I should like to suggest to you a few

things that is seems to me we should consider during the period of transition which a comparatively young organization like ours goes through in the process of establishing itself as a going concern.

We began as a group of separate and completely autonomous state societies, in many cases the outgrowth of older and well established organizations. Then about ten years ago, the necessity for some form of national organization, with which the several state organizations would be affiliated, became apparent. Naturally there arises the question as to whether we shall have a close knit organization of state bodies or a rather loosely knit organization, shall the national body be paramount or shall we adhere to the principle of states' rights. Before forming a final judgment on this basis question, it seems to me we should take into account certain factors. In the first place, it seems pretty well established on the basis of experience that we need strong state organizations sufficiently autonomous to proceed independently of each other on problems in their respective states. It seems equally obvious that we need a strong national body which can proceed similarly insofar as national problems are concerned. The practical question is, how shall these two groups be inter-related? Shall the national society in effect be an aggregation of state societies or shall it be primarily an aggregation of individual members? Specifically, to accomplish our objective of uniform license laws in the states, shall the national society take an active hand in accomplishing this result and shall it attempt to do it directly or through the state societies? If the latter course is adopted, shall the national society have authority to prescribe for the several state societies the objectives and methods? What would happen if a state society refuses to go along with the program for reasons which seem to it good and sufficient? Or, shall the national society set the general objectives and encourage and assist the state societies to accomplish them? How can we keep our individual members interested in a national society which they feel is very remote from them individually? How can we give the individual members a feeling that they have in fact a direct voice in determining the policies of the national body? I know that some of our members now think that they have very little voice in determining the policies of the state societies.

But you say to me,

> "Why worry about these things now? We are busy fighting a war. Let us declare a moratorium on our personal and professional problems for the duration."

That is a natural reaction, but I wonder if it isn't prompted as much by a desire to avoid a difficult task as it is by patriotism. Suppose we do evade the issue for the duration, will we then be ready to go to work together on the vastly more important problems which will be facing us as professional men at the end of the war? Shall we forego the advantage to ourselves and to our profession of setting our own house in order so that we shall be ready to function as a united and cohesive profession, prepared to do our part in the work of reconstruction which lies inescapably before us? I know what my answer is. What is yours?

An Important Message to

Technical Men

The war has carried the manufacturing age to a new peak! Production demands have created technical problems the like of which the world has never seen before! The services of engineers are at a premium. Especially the services of one particular class—executive engineers—*engineers with business training;* engineers who can "run the show."

In these critical times, the nation needs engineers of executive ability *now, today*—not five, or ten years from now! The shortage of such men is acute—even more acute than that of skilled production workers. And company heads, aware of this situation, are offering high rewards to engineers who have the necessary training in industrial management.

Golden Opportunity for Engineers

In this new era, the engineer with vision and foresight has a golden opportunity. He will realize that out of today's tremendous production battles will emerge technical men who not only will play a major role in winning the war, but who also will be firmly entrenched in key executive positions when peace comes.

However, before the engineer can take over executive responsibilities, he must acquire knowledge of the other divisions of business—of marketing, accounting and finance. He has of necessity a vast amount of technical training and experience. But in order to grasp the opportunities that present themselves today—to assume leadership on the production front—he must *also* have an understanding of practical business principles and methods.

The Alexander Hamilton Institute's intensive executive training can give you this essential business training to supplement your technical skill.

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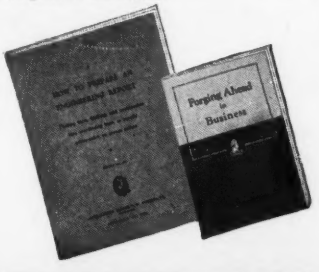

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WHAT'S NEW

And Coming In The Whirl of Change

(News from the industry — gathered by the publisher)

THEODORE G. JOSLIN, of Du Pont, says "never before has a people at war had so much to gain by speeding the day of peace. We fight for a future without parallel in the life of man."

"The past, with scarcities, has been written off. The future will deal with abundance. The foundation has been laid."

"Cheaper and better housing, from an abundance of new materials, for homes of varying architectural design, will cost from $500 to $800 per room."

"Plywood, plastics, rustless steels, non-ferrous alloys, various types of composition board, fire resistant woods, ceramics, and synthetic finishes of lasting durability will be employed in profusion"

"Lighting will be automatic, governed by electric "eyes" sensitive to outside variations in the daylight. Air-conditioning will be employed. Inner walls will be adjustable, so that several combinations of walls can be arranged"

"Homes will cost one-half to heat, and less to maintain and operate. Plastic surfaces will last a lifetime of wear. Electric bills will be smaller.

"Notable changes in automobiles are coming. Sealed cooling, eliminating the nuisance of adding water, weight of car cut in half, power doubled and fuels that yield 50 miles to the gallon, plus being soundproofed and air-conditioned."

"Airliners, freight and passenger, for hemisphere travel, in fleets of hundreds. Air trains, with gliders, which will drop off and pick up "coaches over the principal cities en route."

"Glass that is unbreakable, glass that will float. Wood that wont burn, and laminations of plastics and wood that will compete with the structural steels"

"Hosiery, now derived from air, water and coal, is but the forerunner of many innovations from the same source, ranging from shoes that contain no leather, window screens that contain no wire, machinery bearings that contain no metal"

"Ahead lies the frontier of an empire of vast potential riches".

GERARD SWOPE, President, General Electric states "developments stemming from war research and experience cast their light on the future."

"Finished, and semi-finished materials are bound to alter the post war scene. Plastics have won their opportunity to serve on a large scale, and the facilities to mold, fabricate and shape them have come into being."

"Welding has surged ahead. New light metals represent a considerably greater use, new materials do jobs never done before."

"The cost of light is down. The need is greater. Miniature lamps for field surgery, and for airplane equipment, have been developed within the year"

"Peacetime should bring more light, at less cost, in applications never before possible. Fluorescent light for the home, interrupted by the war demands, awaits proper accessories and fixtures."

"Radio transmitters, always custom built, are now mass produced, foreshadowing greater use of radio, as a service or control device, apart from its entertainment or communication function."

L. M. CASSIDY, of Johns-Manville, estimates we will have "two to three times as many homes built in the 10 year period following the war as were constructed in the ten years prior to the war"

"Roofings that require constant upkeep, will give way to more permanent types. A greater use of metals and plastics will contribute. I do not believe it is too optimistic to predict that good, single family houses are going to be available in the $3500 to $4000 class. Better design, and the elimination of waste space, and smarter utilization of available space, have helped reduce the size of the average home."

WESTINGHOUSE announces that forty finalists in the nationwide Talent Search, all senior high school boys and girls, who completed one of the stiffest aptitude tests leading psychologists could devise, recently met in Washington, D. C. for a five-day science symposium and final examinations.

The forty were chosen from more than 15,000 entrants, as most likely to succeed as scientists.

The LUFKIN RULE Company's development of Chrome Clad Steel Tapes is becoming more and more recognized as a notable advance in the manufacture of measuring tapes.

The apparent reason is that the tape is not only easy to read in most any kind of light, but is extra durable. By durable is meant the permanence of the graduation marks on the lines.

It is also durable in the sense that it is not fragile. The Chrome plating process builds it up slightly in weight, and renders it rust-proof, or highly rust-resisting. It is designed for long life and serviceability.

SIDNEY G. ALBERT, of ALBERT PIPE AND SUPPLY COMPANY, gives credit to the war program for the "rapid advancement of welding and flame cutting in the pipe field. Many items of special fittings, which had to be cast in either steel, cast iron or malleable iron, are now fabricated in order to meet early deliveries."

"Steel flanges are now being fabricated of steel plate by flame cutting the discs, and then facing and drilling these discs. Many important fabricated piping jobs are thus completed within scheduled time."

"With welding accepted in almost every line, welding in the piping field will play a very important part in the future on industrial, governmental and municipal works, because of the distinct advantage which welded joints have over the screwed type connection."

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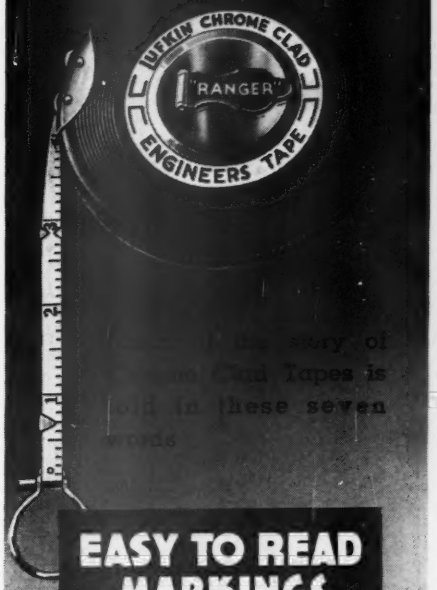

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, Etc., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.

Of American Engineer published Monthly at New York, N. Y. for October 1, 1942. State of New York, County of New York. Before me, a notary public in and for the State and county aforesaid, personally appeared Frederick H. Zurmuhlen, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Engineer and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of Congress 24, 1912 as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and address of the publisher, editor, managing editor and business managers are: Publisher, National Industrial Publications, Inc., Post office address, 381 Fourth Avenue, New York, N. Y. Editor, Arthur V. Sheridan, Bronx County Bldg., Bronx, N. Y. Managing Editor, Arthur V. Sheridan. Business Manager, Frederick H. Zurmuhlen, 1941 Grand Central Term., N. Y. C.

2. That the owner is: National Society of Professional Engineers, (Non-Profit Membership Professional Society) Washington, D. C.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear on the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, old stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

Sworn to and subscribed before me this 1st day of October, 1942. Ann K. Tallon.

FREDERICK H. ZURMUHLEN,
Business Manager